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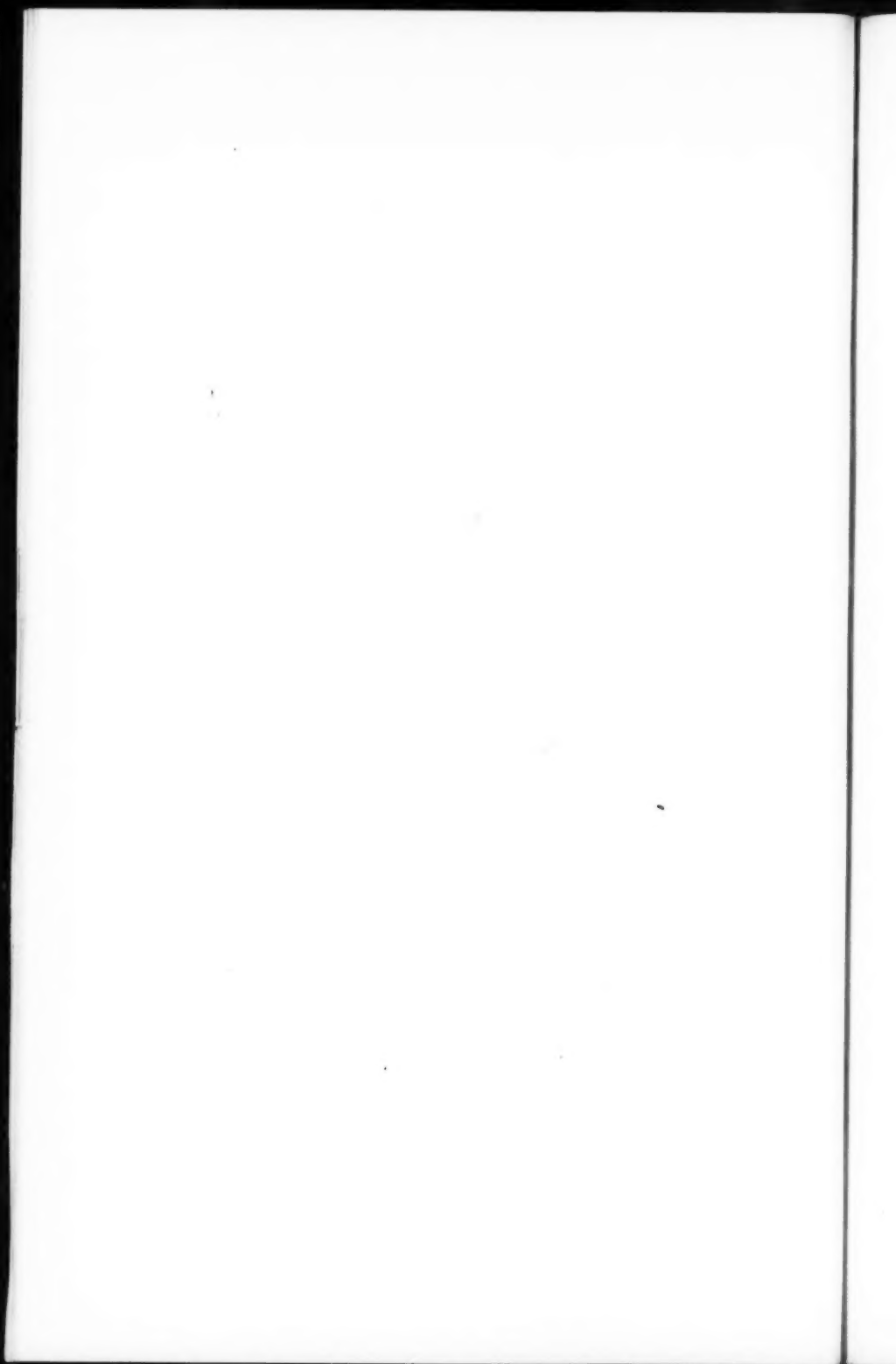
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ETRUSCAN-CAMPANIAN ANTEFIXES AND OTHER
TERRA-COTTAS FROM ITALY AT THE JOHNS
HOPKINS UNIVERSITY¹

RECENTLY considerable interest has arisen in the field of ancient architectural decoration in terra-cotta and many articles have appeared in the last few years from the pens of Rizzo, Milani, Wiegand, Koch, Mrs. Strong, Mrs. Van Buren, and of the Americans, Dr. Luce, Dr. Holland, and others. Most of our histories of Roman art give little attention to Etruscan or Roman Republican terra-cottas, but much of the fictile decoration can now be reconstructed from material in the museums of Italy (especially Caere, Corneto, Orvieto, Velitrae, Florence, Siena, Perugia, Naples, and the Museo di Villa Giulia in Rome) and in the museums of other countries (Berlin, Munich, British Museum, Louvre, Copenhagen, Metropolitan Museum, University Museum in Philadelphia). The development can be studied from the earliest times down to the last century of the Republic where terra-cotta decoration succumbed to marble. Almost all the museums have neglected this important material and are far behind with their publication of it; but as Furtwängler² says "no task would repay us better than to make a complete collection of the numerous but scattered remains of this class of terra-

¹ This paper was read in a preliminary form at the annual meeting of the Archaeological Institute of America, held at Baltimore, Md., Dec. 28-30, 1920, cf. *A.J.A.* XXV, 1921, pp. 79-80. I desire to express my sincere thanks to Professor Dr. Robert Zahn, Director of the Staatliche Museen in Berlin, for permission to publish photographs of Figs. 3-5, 8 and 16, to Mr. H. B. Walters of the British Museum for permission to reproduce Figs. 10 and 22, to Mr. W. Cyril Wallis and Dr. A. O. Curle, Director of the Royal Scottish Museum in Edinburgh for allowing me to publish Figs. 9, 17 and 19, to Professor Currelly and Dr. Harcum of the Royal Ontario Museum for photographs of Figs. 12 and 24, and to Miss Richter and the authorities of the Metropolitan Museum of Fine Arts in New York for their courtesy with regard to Figs. 13 and 25, and especially to Dr. Stephen B. Luce of Boston, who has read the entire manuscript and given many helpful criticisms and suggestions.

² *Meisterwerke*, 1893, p. 252.

cottas. It would not only afford us a glimpse into the brilliant figured decoration which the ancient Etruscan, Latin, and Campanian temples displayed in their terra-cotta revetments, by means of painting and relief, but it would also win back for us a vanished piece of archaic Greek or more exactly of Ionian art."¹ It is with a view to this that I am making known some terra-cotta antefixes (one a unique mould) in Baltimore, which were



FIGURE 1.—MOULD FOR ANTEFIX: BALTIMORE.

came from Capua and others from Tarentum, and an analysis of their style assigns six to Capua and two to Tarentum. Furtwängler, 'Antiken in den Museen von Amerika' (*Sitzb. Mun. Akad.*, 1905, p. 252) wrongly speaks of them all as "*Gute Terra-kotta Antefixe aus Tarent, Medusa u. a. in freiem Stile.*"

Antefixes, as is well known, are the ornaments called in Latin *imbrices extremi* or *antefixa*² and in Greek *καλυπτῆρες* which were placed at the end of the row of cover-tiles in a continuous series along the top of the cornice of a building to conceal the disagreeable aspect of the joining of the *imbrices*, which called for some decoration at their lower extremities. Several of the

¹ Cf. also on the Ionic origin of the antefix, Walters, *Catalogue of Terra-cottas in the British Museum*, p. xvii.

² Cf. Luce, *A.J.A.* XXIV, 1920, pp. 27-36, 352-369; XXV, 1921, pp. 266-278.

³ Mrs. Van Buren, *Figurative Terra-cotta Revetments in Etruria and Latium*, wrongly uses *passim* the form *antefixae*.

purchased in 1887 by a few individual members of the Baltimore Society of the Archaeological Institute through the mediation of Messrs. Clarke and Emerson and Frothingham, who some ten years later purchased several of a different type for Philadelphia and New York.² Professors Frothingham and Emerson have told me that some of the antefixes

antefixes in Baltimore have considerable portions at the back, which project in semi-cylindrical terminations to form the covering tile.

The Etruscans were especially fond of terra-cotta decoration for their buildings for several reasons: (1) The material was cheap and could easily be replaced, as was actually done in many cases, as is proved not only by the different styles found on the same temple site but by the preservation of moulds on some sites.¹ (2) Terra-cotta can be beautifully and elaborately painted, and the Etruscans loved an orgy of color and form, caring little what was contained in the scene.² Since there was no necessary connection between the deity and the decoration, the decorative art of the Greek artists and



FIGURE 2.—CAST FROM MOULD FOR ANTEFIX IN BALTIMORE.

Greek subjects could be used everywhere. (3) The Etruscan temples were generally of wood and the architectonic terra-cotta revetments concealed the ugly wooden beams and protected them against the ravages of the weather. The antefixes likewise were not only a protection materially against the weather and a decoration for the end of the roof-tiles but the ornaments on them show that they were also a spiritual prophylactic against the evil-eye and other malign influences.³ The apotropaic origin

¹ Cf. Della Seta, *Museo di Villa Giulia*, I, p. 182; Luce, *A.J.A.* XXIV, 1920, p. 28.

² As Della Seta says on p. 246 of Mrs. Strong's translation of his *Religion and Art*.

³ Ritual masks with faces as hideous as possible are still in use among savages to scare away evil demons and ghosts and enemies, cf. *Boll. Arte*, I, 1922, pp. 506 ff. The apotropaic character of the Gorgoneion is evident from its frequency on the shields of warriors, cf. *Ath. Mitt.* XXI, 1896, pp. 1 ff. Cf. also Seligmann, *Der böse Blick und Verwandtes*; Elworthy, 'A Solution of the Gorgon Myth,' *Folk Lore*, XIV, 1903, pp. 212 ff.

is apparent from the predominating use of the Gorgon's head on the antefixes. Three of the Baltimore examples are such. The same is true of the Siren or Harpy or Maenad, and, furthermore, even where the head of a local divinity is copied on the antefix, the idea is one of protection. The repetition of such motives in a long array on the roof of the temple would have a decided

magical effect for protection, and that explains the lack of variety in the subjects of the antefixes, especially those from the same building, though there was a tendency to alternate the Medusa and Maenad heads.



FIGURE 3.—FRAGMENT OF ANTEFIX: BERLIN.

To provide replicas, moulds were used and the Johns Hopkins collection possesses a most interesting and unique specimen (Fig. 1). These moulds were objects of commerce, and ancient casts from them with identical types are found in distant regions of Italy. There are a few moulds—mostly broken—in the Museo di Villa Giulia from the larger temple of Vignale (Falerii Veteres), preserved there, perhaps, to renew the antefixes damaged by weather

or fire, though antefixes from all the forms have not been found.¹ But I know of no other mould for a bearded Gorgoneion antefix which is extant. In Capua there is a small fragment of a mould for a beardless Gorgoneion (cf. Koch, *Dachterrakotten aus Campanien*, p. 87, fig. 108). The Baltimore mould is unusually well preserved. Only the upper and left part of the shell is missing and a small fragment is broken off from the lower left cor-

¹ Cf. Della Seta, *Museo di Villa Giulia*, I, pp. 182-184, 187; I especially noticed there in the summer of 1922, a sixth-century mould with a head of Silenus and three fourth-century moulds. In the Archaeological Museum in Florence I also saw a perfectly preserved beautiful mould with the head of Ariadne from Orvieto, but it dates from 250-150 B.C. Cf. *Gaz. Arch.* IV, 1878-9, pp. 67 f., 176, pl. 12, which wrongly gives the provenance as Arezzo. Cf. also Weege in Helbig, *Führer durch die Sammlungen klass. Altertümer in Rom*, II, p. 341. In Naples there is a mould for a Silenus antefix and in Capua part of a mould for an antefix with female head and scallops (Koch, *Dachterrakotten aus Campanien*, pl. XV, 6 and p. 54, fig. 64).

ner.¹ The hair of the Gorgon is arranged in a row of ten "stylized" serpentine curls coiled about the forehead and parted in the middle by a depression which continues down the forehead to the ridge of the nose. Two long locks in pearl-like divisions hang down on either side of the face to the crosspiece above the flat band. The ears are small and placed too high, continuing the curls. The eyes are almond-shaped with thick rims, and protruding, the upper eyelid not overlapping the under; the nose is broad, has ridges and flaring nostrils and is pointed. The open mouth is not so large as usual and shows only five teeth between the great tusks at the end, and the tongue protrudes over the square chin.² There are curved lines about the mouth and an "archaic smile" on the face. The beard is in flame-like S-shaped strands, eight to the left of the middle straight strand, and six to the right. (In the east, Fig. 2, the reverse.) The border of the face ended in an Ionic volute on either side, on which rested the rayed nimbus which is so characteristic of these antefixes and is so well called in Italian "*nimbo baccellato*."³



FIGURE 4.—ANTEFIX IN BERLIN.

The part between the beard and the ridge was surely painted in the ancient casts with a necklace or other ornament. The plinth also was undoubtedly painted with a meander or chessboard pattern or lotus pattern as in other similar examples of antefixes from moulds. The nearest parallels I have found to the scene

¹ The greatest height is 0.33 m.; the width 0.35 m. The height of the head to the bottom of the beard is 0.21 m., and from the outer edge of one ear to the other ear is 0.18 m. The thickness varies from 0.04 m. to 0.07 m. at the upward-projecting piece at the lower right-hand corner. The band below is 0.07 m. high. The clay is of a buff color.

² The mouth is nowhere nearly as long as in many other representations of Medusa. Cf. Miss Lillian M. Wilson, *A.J.A.* XXIV, 1920, pp. 232 ff.

³ Pettazzoni in his suggestive article on 'Le Origini della Testa di Medusa', *Boll. Arte*, I, 1922, pp. 491 ff. traces back both the beautiful and ugly types of Medusa to the Egyptian Hathor heads, but fails to mention the Medusa antefixes where the volutes are so reminiscent of the volutes of the Hathor heads.

on our unique mould are the Gorgoneion antefixes illustrated in Minervini, *Terrecotte del Museo Campano*, pl. XXVII, 2 and pl. XXX, 1 (*Jh. Oest. Arch. I.* XIV, 1911, p. 29, fig. 30; Koch, *op. cit.*, pl. VI, 2) which as well as No. 6 in the Museo Artistico Industriale in Rome and those mentioned by Koch, *op. cit.* p. 37, type VI, seem to have been made from the Baltimore mould.



FIGURE 5.—ANTEFIX IN BERLIN.

A very close parallel, but not from the same mould is part of an antefix in Berlin (7238 = Fig. 3). Somewhat similar, but not such a close parallel as perhaps Luce infers in *Cl. J.* XVII, 1922, p. 350, is the antefix from Conca or Satrium of unknown provenance in the Conservatori Museum¹ which Mrs. Van Buren says is identical with certain antefixes found at Capua and in Campania, type VII in Dr. Koch's classification

in his *Dachterrakotten aus Campanien*, Berlin 1912, pl. VI, No. 3, p. 37, note 1. Our mould, however, did not produce that more coarsely rendered antefix, as its Gorgoneion has two rows of curls, a different number of curls, and no middle line in the curls and forehead. The eyes are narrower. The cheeks are different and the strands of the beard differ in number and shape, as do the side curls and other features. The resemblance is close enough, however, to enable us to say that the Conservatori antefix should be restored with a nimbus such as the Baltimore example has; and this is made certain by an antefix in Berlin (7019 = Fig. 4) which is from the same mould as the Conservatori specimen and also belongs to Mrs. Van Buren's type I, v (cf. other replicas in

¹ This is the closest parallel published by Mrs. Van Buren, who unfortunately omits the closer parallel mentioned in my text above. Cf. Pinza, *Mon. Ant.* XV, cols. 497-498, fig. 150; Mrs. Van Buren in *J.R.S.* IV, 1914, p. 190, pl. XXXIII, No. 2; Mrs. Van Buren, *Figurative Terra-cotta Revetments in Etruria and Latium*, p. 7, type I, v, pl. II, 3. This archaic type of Medusa, with snakes added, occurs as late as 350 B.C. on an archaic bronze breastplate found in Russia, cf. Rostovtzeff, *Iranians and Greeks in Southern Russia*, pl. XIV.

Koch, *op. cit.* p. 37, and pl. VI, 3). There is also a slight resemblance to the antefix from Capua in Copenhagen published in Arndt-Wiegand, *La Glyptothèque Ny-Carlsberg*, p. 32, No. XIII, 2, and pl. 178, No. 4; though the face of the Baltimore specimen is smaller and the shell larger and there are other minor differences. The resemblance of the Conservatori specimen to the Capuan type makes it likely that it came from Capua and confirms the traditional provenance of the Baltimore mould. Those mentioned above (Figs. 3, 4) and one (Berlin 7154 = Fig. 5 = Koch. *op. cit.* p. 36, pl. VI, 4) which forms a transition to Fig. 7 (between Mrs. Van Buren's types I, iii, and I, iv) are also from Curti or Capua. Capua was a very important factory centre not



FIGURE 6.—ANTEFIX IN BALTIMORE.

only for bronzes¹ but may have also exported antefixes and moulds for them. The study of the provenance of antefixes would prove of importance to Roman history since it shows, for example, that Satricum is connected with Capua rather than with Cervetri or Veii as some Roman historians believe, and that Capuan influence extended even to Praeneste (cf. p. 14).

Now let us take up the antefixes themselves, and first the two of the Gorgoneion type. The one shown in Fig. 6 is extremely archaic, without encircling round band and with no projecting piece at the bottom, where it was cut off horizontally; but it is a shell-antefix with part of the cover-tile preserved at the back.² The shell is broken away above and to the left, but enough remains to show that the rays of the nimbus were concave (and not convex as is usually the case) and of different shapes. The head itself is elliptical rather than of the round type we have in the mould and in the next specimen to be mentioned. The snake hair-coils are lacking, and scallops (about 0.055 m. long) take

¹ Cf. Frank, *Economic History of Rome*, pp. 181 f.; Willers, *Neue Untersuchungen über die römische Bronzeindustrie von Capua und Nidgermanen*.

² Greatest height 0.17 m.; width 0.285 m. Width of face across mouth 0.19 m. Thickness varies from 0.02 to 0.035 m. Clay reddish-brown, covered with a whitish slip.

their place. The low-furrowed forehead is divided vertically by a deep groove in the middle, which joins the long horizontal groove running from ear to ear. The eyebrows are painted brownish-black. The eyes are round and large near the nose, but end in long angles on the outer side. The pupils are indicated by a painted black circle with a dot in the middle. The fierce look in the eyes recalls Homer, *Il. XI, 36* Γοργῶ βλοσυρῶπις . . .



FIGURE 7.—ANTEFIX IN BALTIMORE.

δεινὸν δερκομένη. (Cf. the Rhodian pinax, *R. Arch. XIV, 1909*, p. 108, fig. 40 and the Melian-Delian vase, Conze, *Melische Thongefässe*, pl. III.) The ears are small, clumsy, and placed very badly, just stuck on, as it were, without any real artistic feeling for their correctness. The cheeks are much puffed out and the nose long and ending in plump, fleshy nostrils. The mouth is huge and rather hollow, furnished with teeth

that rise about 0.004 m. above the lowest part of the depression. Tusks appear near the middle (and not at the corners as so often) with only two round teeth between them and four on either side above and below (Apollodorus' ὀδόντας μεγάλους ὡς σὺν). The tongue protrudes over the short pointed chin. This Baltimore antefix is very similar to three in Capua mentioned by Koch, *op. cit.* p. 38, type VII B (pl. VII, 2; Minervini, *op. cit.* pl. XXV, 3) but I know of no parallel outside of these, and minor differences in the forehead, teeth, ears, scallops, and thicker back of the nose show that it is not from the same mould. This antefix is surely earlier than the Medusa head found on the Athenian acropolis and supposed to be the central acroterion of the oldest Athena temple.¹ It is as early as the antefix in the British Museum, B 581, and is earlier than the archaic antefix from the Athenian Acropolis where the hair is already arranged in long serpentine locks.² The use of the scallops in place of

¹ Perrot et Chipiez, *Histoire de l'Art dans l'Antiquité*, VIII, p. 624, fig. 317.

² *A.J.A.* XXIV, 1920, p. 236, fig. 4.

the later snaky curls is paralleled by a somewhat similar arrangement in alternate scallops of black and purple about the face of the Gorgon on the handle of the famous Corinthian Amphiarus crater in Berlin.¹ That crater dates from about 575 B.C. and our antefix is probably even earlier. Perhaps the idea of a shell antefix was developed by the Gorgoneion in which the hair was arranged in scallops and the rayed nimbus was adapted later to other types. If so, our antefix forms one of the transition stages and acquires added importance. Whether the scallops were alternately black and purple or of one color, it is impossible to say, as the traces of paint on them have disappeared. This type of the bearded Medusa also may have been influenced by such Ionic cylices as the Phineus cylix in Würzburg,²



FIGURE 8.—ANTEFIX IN BERLIN.



FIGURE 9.—ANTEFIX IN THE ROYAL SCOTTISH MUSEUM: EDINBURGH.

where in the interior is the mask of a bearded Silenus with rays all about, suggesting the nimbus of the antefixes which often have a Silenus. The ultimate origin of such antefixes is undoubtedly Ionic, though Corinthian architectural terra-cottas and vases and the Thermon style of terra-cotta decoration also played their part.

The next antefix (Fig. 7) has a Gorgoneion of the bogey round type and is much later in date, about the end of the sixth century B.C. It is somewhat similar

¹ Furtwängler-Reichhold, *Griech. Vasenm.* pl. 122; Miss Wilson, *A.J.A.* XXIV, 1920, p. 235, wrongly locates it in the British Museum. Cf. especially, the very interesting Corinthian cylix in Furtwängler, *Sammlung Somzée*, pl. XLII, No. 104, where the hair of the Gorgoneion is arranged in similar alternate red and black scallops.

² Furtwängler-Reichhold, *op. cit.* pl. 41.

to the mould but differs in several details of the hair and mouth, and in the flatter flame-strands of the beard.¹ The type shows a very strong family resemblance to that given by Wiegand in *La*



FIGURE 10.—ANTEFIX IN THE BRITISH MUSEUM.

Glyptothèque Ny-Carlsberg, pl. 178, No. 3. There is just enough difference, however, in the hair, beard, eyes, in the relative size of face and shell, and in certain other details to enable us to say that they are not from the same mould. Wiegand in the text pp. 31-32, No. XIII, 1, says that the Copenhagen specimen is from Capua, whence the Baltimore specimen also is said to come.² Other somewhat similar antefixes are one in the Museo Archeologico in Florence, No. 72997,³

No. 7237 from Capua in the Antiquarium of Berlin (Fig. 8), two

¹ Its greatest height is 0.33 m.; width 0.33 m. Height of head from rim to bottom of beard 0.175 m. Width across mouth 0.18 m. From outer edge of left ear to outer edge of right ear 0.13 m. Width of shell 0.065 m. at sides; 0.075 m. at top. Thickness, 0.035 m. A little of the cover-tile is preserved on the back. The clay is reddish-brown covered with a greenish-white slip. The color is well-preserved; flesh white, pupils of the eyes, eyebrows, eyelids, and hair dark brown or black; mouth, tongue, lines between the teeth and on tusks and on ears dark red or purple; the beard has strands alternately dark red and black. This also shows Corinthian influence. For example, on a sixth-century Corinthian alabastron, VI, No. 38, in the University Museum in Philadelphia a Medusa is painted with similar alternating black and red strands of the beard (Luce, *Cat. Med. Sec.* p. 58). Necklace and rosettes or solid circles and main line of meander dark red, the squares black. The only parallel to this pattern in Koch's *Dachterrakotten aus Campanien* is p. 31, fig. 40, 3, but there the squares are hollow and red, and the meander black. Roll around head striped white, red and black like a barber's pole, whereas the rays of the nimbus are outlined alternately in black and red.

² Wiegand curiously speaks of the scallops as "*les feuilles convexes de la palmette*" and of the encircling rim between the scallops and the head as a "*diadème*". Cf. also H21 and H24 in Copenhagen, besides H20, which is illustrated, *op. cit.* pl. 178, 3.

³ Not Nos. 72, 997, as Mrs. Van Buren, *Figurative Terra-cotta Revetments*,

fragmentary antefixes in the Chigi palace at Siena,¹ three from the temple of Satricum in the Villa Giulia (one similar to the Copenhagen specimen and illustrated by Mrs. Van Buren in *J.R.S.* IV, 1914, pl. XXVI, No. 1),² one in Capua, No. 26 in the Museo Artistico Industriale in Rome, two in Frankfurt, one found in the Roman Forum near the *lapis niger* (*Not. Scav.* 1900, p. 143), one in Bonn, one in Munich, and one in Naples (21581) illustrated in Durm, *Die Baukunst der Etrusker und Römer*, Ed. 2, p. 85, fig. 95. A somewhat similar unpublished antefix with Gorgoneion, but belonging to Mrs. Van Buren's Type I, iii, I noticed in the Royal Scottish Museum at Edinburgh (1877.21.3) and Dr. Curle has very kindly allowed me to reproduce a photograph of it (Fig. 9). It comes from the Castellani collection from which the British Museum obtained similar examples in 1877.³ Della Seta in his catalogue



FIGURE 11.—ANTEFIX FORMERLY IN THE MUSEO CAMPANA.

p. 6, says. There is an illustration, *op. cit.* pl. II, fig. 2, though no mention is made of its present location. The Baltimore antefix is of Mrs. Van Buren's Type I, i. To her list should be added, besides the Baltimore specimen, the antefixes I mention in the text, in Copenhagen and Berlin (Fig. 8).

¹ Pellegrini, *Studi e Materiali*, I, p. 145, Nos. 2, 3; Wiegand, *op. cit.* p. 32.

² The illustration is repeated in Mrs. Van Buren, *Figurative Terra-cotta Revetments*, pl. II, 1, though no reference there is made to the *J.R.S.* Cf. Della Seta, *Museo di Villa Giulia*, p. 259, No. 10213.

³ Cf. Walters, *Cat. of the Terra-cottas in the Brit. Mus.* B 595 (Fig. 10), 596, 597. B 596 probably came from the same mould as ours, as did replicas in Capua, Leipzig (1059), Frankfurt (Koch, *Dachterrakotten aus Campanien*, p. 33, pl. V, 6). Somewhat similar are Campana, No. 5178 (22) in the Louvre in the corridor between rooms D and E, where I saw three or four other Medusa antefixes, an antefix from Capua in Naples, Rayet et Collignon, *Hist. de la Céramique Gr.* pl. 16, = Koch, *op. cit.* pp. 30 f., pl. XXXIII, 2; Mosconi's photograph 2442 (Fig. 11, formerly in the Museo Campana) and those mentioned by Koch, *op. cit.* pp. 34-35 (pl. V, 7; VI, 1). These latter are types still further removed from the Baltimore example. Figs. 9, 10 and 11 are examples of Mrs. Van Buren's Type I, iii, of which she publishes no illustration and

of the *Museo di Villa Giulia* (pp. 175, 206, 207, 209, 259, etc.) mentions many antefixes with Gorgoneia, but without illustrations it is impossible to compare them with the

Baltimore specimen. A complete illustrated corpus of antefixes is much needed.¹

The Baltimore antefix because of its suggestion of the Gorgoneia on Attic black-figured cylices and of Corinthian vases and because of its general archaic style, I



FIGURE 12.—ANTEFIX IN THE ROYAL ONTARIO MUSEUM: TORONTO.

should be inclined to date toward the end of the sixth century, though Mrs Van Buren (*op. cit.* p. 6) dates them in the fifth century. It surely is earlier than the type decorated with a palmette-lotus pattern.²

The next type which I shall take up is represented by three speci-

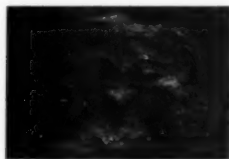


FIGURE 13.—ANTEFIX IN THE METROPOLITAN MUSEUM: NEW YORK.

mentions only one in Siena. Koch, *op. cit.* p. 34, mentions also No. 9 in the Museo Artistico Industriale in Rome and Arndt, *Glyptothèque Ny-Carlsberg*, pl. 178, 4, which is from the same mould as Fig. 10.

¹ To aid one who may start such a corpus I reproduce here with the kind permission of the Royal Ontario Museum and the Metropolitan Museum two unpublished Medusa antefixes of quite different and more conventionalized type. Fig. 12 (Buff clay. Part of circular tile preserved at the back. 0.24 m. wide at the bottom, 0.19 m. high; 0.02 m. thick. Sturge collection) is an antefix of some small building or sarcophagus from Selinus, probably of the early fifth century. The fourteen locks of hair above the forehead are straight and there are five horizontal strands below the ears. There is a vertical depression in the centre of the forehead. The end of the nose is broken. The nostrils flare widely. There are two tusks at either end of the open mouth with four teeth above and one on the lower jaw on either side of the protruding tongue. There are two crude projections of clay below the chin and five strands of beard on either side. Traces of dark paint exist on eyes, lower end of nose, teeth, and tongue. Fig. 13, No. 10.210.44, in the Metropolitan Museum is also of later date and different in details, though in general similar to the Toronto specimen.

² For later fifth century antefixes with the vegetation Gorgoneion cf. Frothingham, *A.J.A.* XIX, 1915, pl. 13.

mens in Baltimore, showing a decided development. The type is generally called the Maenad type but I do not feel sure that a Maenad is always meant and in some cases some local female divinity is equally plausible. The earliest (Fig. 14) in the series is badly broken. It has three concave curved depressions on the back and may have formed the end of a tile without any shell.¹ Below the diadem the hair is only roughly blocked out, arranged in waves, four on either side of the parting in the centre, along the forehead to the features are sharply defined.



FIGURE 14.—FRAGMENT OF ANTEFIX: BALTIMORE.



FIGURE 15.—ANTEFIX IN BALTIMORE.

The ears which are set high. The eyes slope inward. The mouth curves up toward the corners. The so-called archaic smile is very apparent. It is a good example of sixth century Etruscan workmanship, and resembles in general style the antefixes from Cervetri published by Dr. Luce in *A.J.A.* XXIV, 1920, p. 32, especially fig. 5.² But it is a different type and to be connected with Capua. I have noticed a somewhat similar type but with different hair and diadem in Room XI of the Musée du Cinquenaire in Brussels. The nearest illustrated parallels are Koch, *op. cit.* pl. XII, 5; pl. XIII, 1; p.

¹ Height over all 0.18 m. Width 0.15 m. Height of head from bottom of diadem to bottom of chin 0.14 m. Width of face across the cheeks 0.09 m.

² Cf. also *J.R.S.* IV, pl. XXXII, No. 1, from the garden of the Church of the Ara Coeli.

58, fig. 70, in Frankfurt, perhaps from the same mould as the Baltimore fragment, and Minervini, *op. cit.* pl. VI, 2, and pl. XVIII, 1, which help restore the missing parts. Cf. the replicas



FIGURE 16.—ANTEFIX IN BERLIN.

American Academy in Rome. The type is that given by Minervini, pl. V, 3, and Koch, *op. cit.* pp. 55 f. The replica in Berlin (7897) illustrated by Koch, pl. XII, 2, is certainly from the same mould and has even the same meander pattern as the Baltimore example, and probably those in Capua also were cast from the same mould.

Other somewhat similar antefixes are Wiegand, *La Glyptothèque Ny-Carlsberg*, pl. 178, No. 5, text p. 32, No. XIII, 3 (from Capua), No. 7899 in the Antiquarium of Berlin (Fig. 16),

listed by Koch, *op. cit.* p. 57, type III and our next antefix.

The next antefix (Fig. 15)¹ shows a slight development, especially in the long pearl-like locks which curve under the disks from which the stalks, painted with red lines, rise, curving outwards, and in the addition of drooping lotus buds and of the rayed nimbus or shell above, which we can restore from analogy with similar examples. The type is not given by Mrs. Van Buren, though it is distantly related to her type IV, vii, of which there is a specimen from Praeneste in the



FIGURE 17.—ANTEFIX IN THE ROYAL SCOTTISH MUSEUM: EDINBURGH.

¹ Reddish-buff clay. Greatest height 0.36 m., width 0.33 m. From top of diadem to chin 0.145 m. Width across cheeks 0.07 m. Band at bottom 0.075 m. high. Part of cover-tile at the back is preserved. The meander pattern on the lower band is red and black.

one (unpublished) in the Royal Scottish Museum at Edinburgh (Fig. 17) which looks as if from the same mould as Fig. 16 except for the godroons at the bottom (1877.21.4 from the Castellani collection, from Capua), one badly preserved in the Museo Archeologico in Florence, *Not. Scav.* 1896, p. 36, fig. 9 (from Satricum), Durm, *Die Baukunst der Etrusker und Römer*, p. 85, fig. 95 = Koch, *op. cit.* pl. XII, 5 (in Naples later than our specimen), Minervini, *Terrecotte del Museo Campano*, pl. XXX, 1 (*Jh. Oest. Arch.* I, XIV, 1911, p. 27, fig. 29), Walters, *History of Ancient Pottery*, p. 98, pl. II, No. 2 (B 590 in Brit. Mus. from Capua = Koch, *op. cit.* pl. XIII, 2. Later than our specimen and without



FIGURE 18.—ANTEFIX IN BALTIMORE.¹



FIGURE 19.—ANTEFIX IN THE ROYAL SCOTTISH MUSEUM: EDINBURGH.

the lotus buds). Cf. also the list given by Koch, *op. cit.* p. 56 and pl. XXXIII, 1 and Minervini, *op. cit.* pl. XXIII. The strongest illustrated likenesses are in the specimens in Arndt, Minervini and Koch, which would enable us to restore the missing parts of our specimen. But even here there are differences in certain minor details which prove that another mould was employed. The type is characteristically Campanian and can be dated toward the end of the sixth century B.C.; among other things by the wavy hair, merely

¹ Buff clay. Greatest height 0.34 m.; width 0.34 m. From top of head to crosspiece 0.19 m. Height of face 0.10 m.; width of face 0.07 m. Width of rays 0.075 m. Thickness 0.035 to 0.04 m. Purple and black colors over thin cream-colored slip. Hair, brows, and eyes black, lips, earrings, patterns purple-red. The base has a triple meander. Flutings of shell outlined with red and black. This is an example of Mrs. Van Buren's Type IV, xviii.

blocked out, the slanting eyes with bulging eyeballs and upper eyelids not overlapping the under, and the so-called archaic smile.

The next antefix (Fig. 18) shows a decided artistic progress, though the almond-shaped eyes beneath the plastic eyelids are still partly flat. The hair is better done, arranged in three double half-circle waves or scallops over the forehead on either side of the central parting. It falls straight behind either ear in two thick pearl-like strands to the ridge of the band below. The ears curve, ending in small disk-like earrings. The features of the face are much more sharply defined. The "archaic" smile is less pronounced, rather faint. The eyes have not that expressionless stare and are smaller. They slope toward the nose to which the painted eyebrows have a strong curve. There are not the deep curves from the nostrils around the mouth. The chin has not the dimple in the middle. Yet the heads are of about the same size and there is about the same space from the chin to the band below as in the previous example, in this specimen decorated with a painted triangle enclosing the sign of good luck, the swastika,¹ not found among the designs on this type given by Koch, *op. cit.* p. 42. I cannot help feeling that this type developed out of the previous one by extending the circular band with its volutes (above the head) to form the long encircling horse-shoe band with its barber-pole decoration which ends in Ionic volutes and by extending the seven-rayed nimbus as in the Copenhagen and other examples to form the nimbus with its sixteen rays or scallops.

There are many specimens similar to this antefix but with slight differences, several of which have already been published.²

¹ On the swastika, cf. *Records of the Past*, VI, 1907, pp. 236 ff.; VIII, 1909, p. 91; Wilson, 'The Swastika', *Report of National Museum, Wash.* 1894; L. Müller, *Proc. Roy. Dan. Acad. of Science*, V, 3.

² Cf. Daremberg et Saglio, *Dictionnaire, s.v. Antefixa*, p. 286, fig. 332 (Louvre); *Not. Scav.* 1896, p. 44, fig. 16 (from Satricum); Helbig, *Führer*, II, p. 350, No. 1786; Mrs. Van Buren, *Figurative Terra-cotta Revelments*, p. 20, pl. XIII, figs. 2 and 3, fig. 2 from the same mould, I believe, as the Baltimore antefix; *Mel. Arch. Hist.* XVI, 1896, p. 157, fig. 6, p. 158, fig. 7 (no earrings, number of scallops different. From Satricum); Walters, *Cat. of Terra-cottas in the Brit. Mus.* B 592 ff., B 604, and several others listed by Koch, p. 41, type IV, pl. VIII, 1. I noticed last summer nearly a dozen antefixes of related type, in the Villa Giulia; cf. Della Seta, *Museo di Villa Giulia*, No. 10201; cf. also Della Seta, *Art and Religion*, p. 246. Cf. also Nos. 104, 445 (261) and two others (numbers invisible) in the Louvre and especially the unpublished No. 1877.21.8 in the Royal Scottish Museum at Edinburgh, from Capua and formerly in the

That illustrated by Minervini, *op. cit.* pl. XVIII, 2, and by Koch, *op. cit.* pl. VIII, 1, is probably from the same mould and in that case should be restored with sixteen, not fifteen scallops. The archaic manner still preserved in the modified "smile", in the sloping almond-shaped eyes, in the arrangement of the hair and comparison with the archaic "old-maids" of the Acropolis

and with Spartan reliefs (*Ath. Mitt.* II, 1877, pl. XXI) prove that this type belongs in the late sixth century B.C. or possibly the beginning of the fifth. The sixth century seems to be the



FIGURE 20.—ANTEFIX IN PRINCETON.



FIGURE 21.—ANTEFIX IN BALTIMORE.

more probable date as many antefixes of the beginning of the fifth century B.C. with female faces show stronger features and more elaborate arrangement of the hair and a more luxurious nimbus, and the shell was probably used before the fifth century. Compare the fifth century type (Fig. 20) of which there are eleven examples at Princeton,¹ said to have come from Cervetri; although they do

not check up with any of the Cervetri types, and more probably come from Corneto.² That type seems to me to resemble re-

Castellani collection, on which the hair curves at the end but which has also a meander pattern on the lower band (Fig. 19). Fenger, *Le Temple Étrusco-Latin*, p. 12, fig. 37, is a later and somewhat different development of the same type.

¹ I owe the photograph to the kindness of Professors Allan Marquand and G. W. Elderkin.

² Dr. Luce informs me that in a letter received from Professor Marquand, dated Dec. 14, 1920, the information is given that these antefixes come from Corneto.



FIGURE 22.—ANTEFIX IN THE BRITISH MUSEUM.

we have so far discussed that we can safely call them Etrusco-Campanian and credit them with Capua (whence they are said to have come) as a provenance. The resemblance to the Copenhagen, British Museum, Naples, Berlin, and other examples from Capua is so extraordinarily clear and close, that although not from the same mould, their source of inspiration is undoubtedly the same. In the case of those from Satricum and elsewhere which are similar to ours, Capua is also a likely place of manufacture. Capua had a great industry in art objects and was about the only ancient city later to have a factory system. Why couldn't it in Etruscan days, before the Greeks came, have made antefixes or at least the moulds and exported them

motely the type from Lanuvium as illustrated in Della Seta, *Museo di Villa Giulia*, pl. XLVIII, though that has more elaborate hair and a more luxurious nimbus (cf. also *Monumenti*, Suppl. I–III). The shell resembles those from Falerii in Della Seta, *Museo di Villa Giulia*, pl. XXXVIII No. 2.¹

To sum up, the family resemblance to the types of Capua is so strong in the six Baltimore antefixes



FIGURE 23.—ANTEFIX IN BALTIMORE.

¹ Cf. also Della Seta, *Religion and Art*, fig. 128.

to Satricum, Falerii, and elsewhere? The Baltimore mould is certainly of the Capua type, type No. VII found at Capua, in Kochs' *Dachterrakotten aus Campanien*, pl. VI, No. 3, p. 37, note 1.

The three other terra-cottas in the Johns Hopkins collection are of an entirely different group. They are much simpler in form, less highly colored, and date from a later period, perhaps

the fourth century B.C. The first one (Fig. 21) is of semi-elliptical form.¹ In relief is a female head to front, slightly turned to left. The hair is done up in a kind of top-knot tied in the middle with a fillet which is also bound round the hair beneath the top-knot and which streams out to either side. The hair on the head below the fillet is wavy and locks float downward behind



FIGURE 24.—ANTEFIX IN TORONTO.

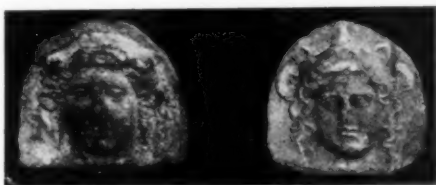


FIGURE 25.—ANTEFIXES IN THE METROPOLITAN MUSEUM: NEW YORK.

the ears and around the sides of the face in a somewhat wild fashion, a few stray locks reaching the shoulders. In the ears are earrings in the form of round disks. On the neck are two raised ridges of flesh and on the breast the edge of the chiton is visible. The pupils of the eyes are incised. This is of the same type as D 666 in Walters, *Catalogue of Terra-cottas in the British Museum*, which was acquired

¹ Reddish-buff clay. Greatest height 0.19 m.; width 0.18 m. From top of hair to chin 0.12 m. Width across face 0.065 m. Thickness 0.025 m. Part of the circular projection at the back is preserved.

from Tarentum in 1884 and is of the same height. The resemblance is so close that after seeing the original and a photograph (Fig. 22) I am convinced that both come from the same mould.

The next antefix (Fig. 23) is of a square or rectangular shape with curved top.¹ The large oval



FIGURE 26.—TERRA-COTTA IN BALTIMORE.

face in relief, slightly turned to left, with the big bumps over the corners of the eyes near the nose, with its full sensuous cheeks and prominent lips and especially with the wildly waving snake-like locks of hair, reminds one strongly of the kindly type of Medusa head,² but the petasus which takes the place of the usual snakes on top of the head makes it likely that Hermes is meant. At Tarentum antefixes have been found representing Heracles, Omphale, Io, Pan, Dionysus, Zeus, Ammon, satyrs, etc., as well as Medusa,³ but I have found only one Hermes from Tarentum and that not an antefix, mentioned in *J.H.S.* VII, 1886, p. 40. Either Medusa is represented here wearing the petasus,⁴ or much more likely Hermes is represented on this antefix in a type taken from the Medusa antefixes. So on a

similar antefix from Tarentum⁵ Pan is reminiscent of Medusa. In the Royal Ontario Museum of Toronto G 2013 is an antefix of the Tarentum type, representing the Medusa type of face with a Phrygian cap and streaming snaky hair (Fig. 24).⁶ In the

¹ Reddish-buff clay. Height over all 0.18 m.; width 0.19 m. Height of head 0.11 m. from the bottom of petasus to bottom of chin. Width of face 0.08 m. Width across bottom 0.145 m. Circular tile at back 0.05 m. deep.

² See Roscher, *Lexicon der Gr. und Röm. Myth.* I, cols. 1721 ff.

³ Walters, *Cat. of Terra-cottas in the Brit. Mus.* D 662 ff.

⁴ In the John Thompson collection of Roman glass in the University of Pennsylvania Museum, XIV, No. 61, there is a large round moulded glass plaque with a Medusa head, on which the hair at the top looks a little like a petasus (Luce, *The University Museum, Cat. of the Med. Sec.* p. 220).

⁵ *J.H.S.* IV, 1883, pl. XXXII, 1; *Brit. Mus.* D 674.

⁶ Clay is of a reddish color. Height 0.185 m.; width 0.195 m.

Metropolitan Museum there are five or more such small antefixes of the Tarentum type (10.210.52, case B) and while one represents Medusa herself, in the case of others the Medusa face is adapted to Pan or Heracles (Fig. 25). The type on our antefix reminds one a little of the Apollo on coins of Catana about 400 B.C.¹ Probably, then, our antefix dates from the fourth century.

The last terra-cotta (Fig. 26) is a puzzle to me. It is of an elongated type, representing only half of a fine male head with hair arranged loosely in ringlets. Beyond the nose it is smooth and curved as also at the back of the head.² The shape is rather unusual and it is difficult to say whether it is an architectural piece from a pediment or some other part, perhaps a corner, of a building or a votive offering in some temple. In the British Museum in the room devoted to Greek and Roman Life (case 89) I have seen a terra-cotta half bearded male-head to left, painted red, and flat on one side, and in the Louvre B 26 and B 244, similar half heads, but these have no such curving piece as ours. In Bologna in the Museo Civico in room VIII, No. 3440 there is an Italic-Etruscan terra-cotta half head with curving back similar in shape to ours, and I have seen in Toronto in the possession of Professor N. W. DeWitt of Victoria College a terra-cotta half head from Veii (Fig. 27) so similar to



FIGURE 27.—TERRA-COTTA
IN TORONTO.

¹ Cf. for example Hill, *Coins of Ancient Sicily*, pl. IX, 2.

² Reddish-buff clay. Greatest height 0.31 m.; width 0.135 m. (from rounded back to tip of nose). Height of head 0.23 m.; height of neck 0.08 m.; greatest width of shell at side 0.04 m. (near lower neck). Width of shell at top of hair to side 0.02 m. Perfectly preserved on back. Large circular hole there into hollow interior, 0.045 m. in diameter. Hole 0.08 m. from top. Bottom of terra-cotta open. Back rounded into side which is fairly flat, on other side of profile as seen in the illustration. The piece is complete in itself. There was no other half attached as in *Not. Scav.* V, 1908, p. 220, fig. 25, which seems to have been a gift to a temple. It is, of course, not an antefix.

ours in form and subject that I am inclined to think they must come from the same place. Professor DeWitt informed me that some thirty or forty such terra-cottas were found in a cache at Veii about 1904, which makes it probable that they were gifts to some temple. It is difficult to say whether a mortal or a divinity is represented, but the figure has mostly portrait features. The Baltimore specimen may be as late as the third century B.C., though it might even be fourth. The Toronto specimen is later.

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A NOTE ON THE NEW BASES AT ATHENS

THE official publication of the three new marble bases from the wall of Athens, by M. Philadelphus,¹ appeared coincidentally with my study of the new stele capital in the Metropolitan Museum at New York.² Thus it happens that each of us has referred to the base from Lamptrae in order to support contrary opinions, his being that the new bases formed in each case the topmost member of a pyramid of steps, mine that the stone in New York formed the capital of a tall shaft. In attempting to explain this divergence of opinion, I examined the illustrations of the three Athenian bases, with the result that they are very clearly to be interpreted as of my type 2b,³ each forming, not the

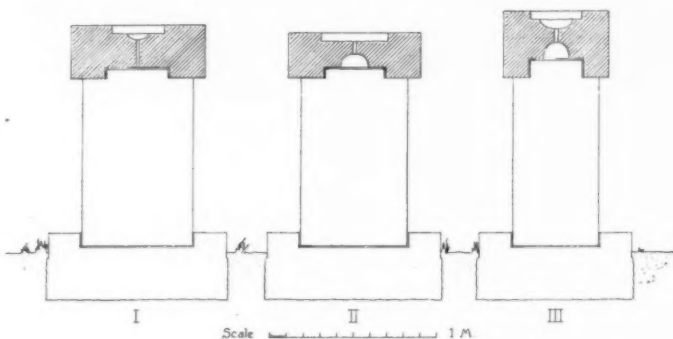


FIGURE 1.—THREE PEDESTALS AT ATHENS: CONJECTURAL RESTORATIONS.

top step of a pyramid, but the capping stone of a pedestal (Fig. 1). Each has, in the bottom, a mortise 0.33–0.39 m. square, and, in the top, an elliptical socket of the proper dimensions for

¹ *B.C.H.* 1922, pp. 1–35, pl. I–VII; cf. *A.J.A.* 1922, pp. 355–356; *J.H.S.* 1922, pp. 104–106, pl. VI–VII, *Dedalo*, 1922, pp. 207–227; *Cl. Weekly*, 1921–22, pp. 209–210.

² *A.J.A.* 1922, pp. 261–277.

³ *A.J.A.* 1922, p. 271, fig. 9.

the statue. These two depressions seem in every case to be connected by a hole passing vertically through the stone, though M. Philadelphus does not mention this fact. He does tell us, however, that base No. I has, in the centre of the statue socket, a cup-shaped depression 0.13 m. in diameter and 0.04 m. deep, with traces of lead, and the connecting hole is visible in the top and bottom views.¹ Base No. II, on the other hand, has a circular cavity 0.172 m. in diameter increasing the depth of the lower mortise, and so facilitating the spreading of the molten lead. And base No. III, that signed by Endoeus, has, according to M. Philadelphus, the additional depressions at both top and bottom, leaving between them a thickness of only 0.08 m., partly pierced by a hole 0.06 m. deep; probably this hole goes entirely through, and is at present plugged at the bottom. The method of connection, therefore, is unquestionable: these were capping stones to be placed on square shafts (or pedestal dies) of smaller size. And in one case, at least (Base No. I), the dimensions of this shaft are indicated by the roughened tooling on the bottom of the capping stone, extending one third of the distance from the mortise to the outer edge; allowing the normal amount for the contact margin, the die would recede about 0.07 m. from the edge of the cap. At Athens, therefore, just as in New York, we are concerned, not with bases in the proper sense of the term, but with capitals of pedestals.²

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¹ *B.C.H.* 1922, pp. 3-4, fig. 2-3.

² A similar pedestal, intended for a tripod, is described in specifications of the middle of the fourth century: Holleaux, *Ath. Mitt.* 1906, pp. 134-144; Dörpfeld, *ibid.* pp. 145-150; Lattermann, *ibid.* pp. 359-362, and 1908, pp. 75-80; Robinson, *A.J.P.* 1907, pp. 425-430.

THE DEITIES OF THE SACRED AXE

In this paper, I shall attempt to explain the symbol of the double-axe with special reference to the religions of Greece and Asia Minor. After examining the origin, meaning, and application of the symbol, I shall proceed to point out its possible utility in the interpretation of the complicated mysteries of the Cabiri.

The importance of the double-axe as a sacred symbol in ancient Crete is too well-known to require discussion. It will suffice to mention here some of its more conspicuous manifestations. Axes appear, for instance, inscribed on the corner-stones and door-jambs of the palace at Cnossus, as well as on two columns perhaps erected as aniconic images.¹ They occur again embedded in the sides of pillars on one of the palace frescoes;² they are wedged as votive offerings in the stalactite pillars of the Dictaeon cave.³ On a larnax from Palaikastro, a slender column supports the double-axe with the sacred horns;⁴ the sarcophagus from Hagia Triada shows axes placed on pillars which are covered with foliage.⁵

The same symbol is frequently found on Minoan pottery,⁶ and occurs on stones and gems, such as the steatite lentoid found at Cnossus,⁷ and the agate intaglio of the bull's head from between

¹ *J.H.S.* XXI, 1901, pp. 110 f. For the view that the axes are masons' marks, see Burrows, *Discoveries in Crete*, pp. 110 ff.

² *B.S.A.* X, 1903-1904, p. 43.

³ *B.S.A.* VI, 1899-1900, p. 100.

⁴ *B.S.A.* VIII, 1901-1902, p. 299, pl. XVIII.

⁵ Von Duhn, according to Cook (*Trans. of the Third Internat. Cong. for the History of Religions*, II, p. 189). For a different view, cf. Paribeni, *Rend. Acc. Lincei* (Serie 5), XII, 1903, p. 344.

⁶ So at Cnossus: *B.S.A.* VII, 1900-1901, pp. 52 ff.; VIII, 1901-1902, pp. 103-106; IX, 1902-1903, p. 114. At Gournia: *Gournia, Vasiliki, and Other Prehistoric Sites* (Excavations of the Wells-Houston-Cramp Expeditions, 1908), pp. 42, 53, 60; pls. I, 2, K, and VII, 26. It is, of course, possible that in some cases such motifs have become purely decorative.

⁷ *B.S.A.* VIII, p. 102, fig. 59.

the horns of which rises the axe.¹ On the great gold signet from Mycenae² it is inserted above the group of the seated goddess and handmaidens. Finally a small shrine in the palace at Cnossus contained a double-axe of steatite leaning against a pair of horns, and possible traces of two others originally inserted between the branches of this pair of horns and of a corresponding one upon the other side.³

In connection with the prominence of the double-axe in Cretan worship, Mayer has plausibly suggested⁴ that *labrys* and *labyrinthos* are etymologically related, and Evans has conjectured that the labyrinth may have derived its name, "the House of the Double-Axe", directly from the worship of the axe-fetish.⁵ A vase from Cyprus, where the worship of Zeus *Labranios* occurs, repeats the symbol.⁶

Though in many of the cults of Asia Minor the axe survived as the special attribute of Zeus, the predominance of the female over the male element in divinity, manifested in the religions of both Crete and Anatolia,⁷ makes it antecedently probable that the axe originally belonged rather to the Mother-Goddess than to the Father-God.⁸ And, in fact, the presence of three female

¹ *B.S.A.* IX, p. 114, fig. 70.

² *J.H.S.* XXI, 1901, p. 108, fig. 4. For an example from the Tiryns treasure, see 'Αρχ. Δελτ. II, 1917, pp. 13 ff. Compare also the mould from Siteia ('Εφ. 'Αρχ. 1900, p. 26, pl. 4), and the clay sealing from Zakro (*J.H.S.* XXII, 1902, p. 78, fig. 5, No. 6) where the form of the *labrys* resembles the type on the Mycenaean signet.

³ *B.S.A.* VIII, 1901-1902, p. 101, fig. 57.

⁴ *Jb. Arch. I.* VII, 1892, p. 191.

⁵ *J.H.S.* XXI, 1901, p. 109, n. 7.

⁶ Evans, *op. cit.* p. 107, fig. 3. Despite its prevalence, the axe-symbol is not a purely Minoan development, for a single axe was the ancient Egyptian character denoting divinity. A "Priest of the Double-Axe" is twice reported from the Fifth Dynasty, while the Twenty-Sixth produced a priest of "Ha of the Double-Axe". See references given by Cook (*Trans. of Third Internat. Cong. for the Hist. of Religions*, II, 1908, p. 184), and compare also Evans, *The Palace of Minos*, I, p. 15. Schweitzer, *Herakles, Aufsätze zur gr. Religions- und Sagen-geschichte* (Tübingen, 1922) suggests, pp. 21 ff. and p. 30, n.5, that we should look to the Carians, or rather to the great stock of which the Carians were a remnant, for the origin of the axe-cult. Schweitzer's interesting and suggestive monograph was called to my attention only after the text of this article was written.

⁷ Ramsay, in *Hastings' Dictionary of the Bible*, extra vol. 1904, p. 122.

⁸ So Evans, who associates the axe-fetish with the cult of Zeus, declares rather inconsistently (*B.S.A.* VII, 101 f.): "The presence of the female idols

idols, among which is the Dove-Goddess, together with the steatite double-axe and possible traces of two more axes in the shrine at Cnossus; the steatite lentoid with a double-axe of the reduplicated pattern in the hands of what seems to be a female divinity; the schist mould from Palaikastro,¹ with the figure of a goddess holding a double-axe in each hand (Fig. 1); the seal impressions from Hagia Triada where the attendants of the goddess carry the axe;² the association of the symbol with the Snake-Goddess



FIGURE 1.—SCHIST MOULD OF GODDESS WITH DOUBLE-AXE:
FROM PALAIKASTRO.

on the same base as the Sacred Horns and Double-Axe seems to show that this symbolic weapon was associated here with the cult of a Goddess as well as a God. . . . The Double-Axe, the proper emblem of the Male God, was also common to the Goddess . . . and there are indications that of the two it was Rhea who took precedence in Minoan cult." In *The Palace of Minos*, p. 447, I am gratified to find the bolder statement: ". . . Taken in connection with the traces of Minoan religion in its prevailing aspect, not at Knossos alone, but throughout the length and breadth of Crete, it is clear that the special aniconic form of the supreme Minoan divinity, as of her male satellite, was the Double-Axe."

¹ *B.S.A.* IX, p. 92; 'Εφ. 'Αρχ. 1900, pl. 4.

² *B.S.A.* IX, p. 60.

at Gournia;¹ and finally the appearance of the double-axe on the gold signet from Mycenae above the seated goddess and her worshippers,—all confirm the impression that the axe indicates predominantly the power of the Mother.² Even the votive axes of the Dictaeon and Idaean caves may remind us that in both Zeus was worshipped as the divine son, and therefore subordinate, of the divine mother. On the other hand, I have found no cases in Cretan worship where the double-axe is obviously the attribute of a male divinity only.³

To understand the meaning of such a cult, we may remember the well-nigh universal use of the axe among primitive peoples to denote thunder and the thunder-deity,⁴ recalling also the fact that Cretan votive axes are marked with zig-zag lines which may well denote lightning.⁵

In tracing the use and development of the thunder-stone, Blinkenberg has shown how the peoples of eastern Asia Minor, Assyria, and North Syria who employed the single-edged axe instead of the Minoan weapon, conferred their own peculiar tool upon their thunder-deities. A third thunder-weapon, the Babylonian trident, must, as he explains, also be taken into consideration, together with its Assyrian development, the double trident, which in its turn became the Greek *keranos*. Both these forms of the thunder-weapon may have been affected by the double-axe.⁶

Lastly, where the spheres of influence approach each other,

¹ In the shrine of the Snake-Goddess was discovered a fragment of a pithos on which a double-axe and a disk had been modelled in relief (*Annual Reports of the Board of Regents of the Smithsonian Institute*, 1904, pl. II, fig. 1, p. 570; *Gournia*, p. 47, pl. XI, 8). For the probable identity of Snake-Goddess and Mother-Goddess, cf. *B.S.A.* IX, pp. 85 f; *Palace of Minos*, p. 500.

² So Mosso (*Mem. Acc. Lincei*, Serie 5a, XII, 1909, p. 510) characterizes, as the sole object of ancient Minoan worship, "il grande mistero della natura feconda e della terra madre della vita. Quando i Cretesi sentirono il bisogno di avere un simbolo della divinità ed un oggetto che la rappresentasse, scelsero il simulacro religioso della scure a doppio taglio. . . ."

³ If I am right, Farnell is mistaken when he says (*Greece and Babylon*, p. 93), that the double-axe in Minoan palaces belongs to the thunder-god, though occasionally the goddess might borrow it.

⁴ Cf. Blinkenberg, *The Thunder-Weapon in Religion and Folklore*, *passim*.

⁵ *B.S.A.* VII, p. 53, fig. 15.

⁶ A letter to an Assyrian king mentions the double-axe as carried for Dilbat (the planet Venus, identified with Ishtar). See Jastrow, *Religion Babylonians und Assyriens*, II, 616, n. 9; Delitzsch, *Beiträge zur Assyriologie*, II, 31 f.

as in the Hittite country, we find combinations of the single axe and the trident-like weapon, both of which are carried by the Hittite thunder-god,¹ whereas his descendant, Jupiter Dolichenus, bears the double-axe and the *keranos*. The trident, indeed, appears on the coins of Carian Mylasa² together with the double-axe. It is found also in Crete, though apparently only as a mason's mark,³ and here, too, in one case,⁴ a trident is combined with a double-axe. As, however, the trident in this instance has sometimes been interpreted as a branch, I shall later attempt another explanation of the compound character, which indeed may be quite devoid of religious significance.⁵

As Blinkenberg points out,⁶ the thunder-stone, at first represented by the stone axe, was replaced when this implement went out of use by the double-axe of bronze peculiar to the culture of the Minoan sphere of influence, including western Asia Minor. When the double-axe had once become established in cult, there was doubtless strong reason for its retention. For the Goddess-Mother, as the supreme source of life, unites in herself the male and the female elements, and such a combination finds appropriate expression in the double-axe.⁷ Then, too, if

¹ Blinkenberg, *op. cit.* fig. 12.

² Blinkenberg, *op. cit.* figs. 22 and 23.

³ *B.S.A.* VIII, 1901-1902, p. 10; cf. IX, p. 101.

⁴ *B.S.A.* X, 1903-1904, p. 28.

⁵ The heaven-god, *Tā Kōntrayēs*, appears with the lightning-bolt on coins of Domitian (Milani, *Studi e Materiali* I, 1), but this evidence is, of course, too late to be significant.

⁶ *Op. cit.* p. 24.

⁷ This solution of the symbol is suggested by Legge, *Forerunners and Rivals of Christianity*, II, 67, n. 3. It seems fairly well established that the sex-aspect of the primitive earth-goddess was so unstressed that she was virtually regarded as genderless. The double-axe would express the next stage in primitive thought; the two necessary elements for procreation are recognized, but the Mother, the source of life, combines them. It is convenient, but not altogether correct, to use of such a combination the word "bisexual," for that implies an artificial conception, whereas the process was in reality the gradual emergence from primitive vagueness of the idea of the divine. In Caria and Cyprus, disgusting legends arose from the supposedly androgynous nature of the supreme deity, but these are the exception rather than the rule. The "bearded Ishtar", often misinterpreted as bisexual, has been shown by Jastrow (*Revue Archéologique*, XVII, 1911, pp. 271 ff.) to be a phrase derived from the streaming rays of the planet Venus. The goddess-mother was one and yet two, as later she became one and yet a trinity. Cf. Ramsay, *Cities and Bishoprics of Phrygia*, p. 93: "The distinction of sex is not . . . an

before the axe became associated with the thunder-god, it denoted the Great Mother's power over the sky and the lightning, the double form may have seemed an appropriate symbol of a deity who united with this function the protection of the earth and the fruits of the earth.¹

It would be gratifying if we could support the hypothesis that the double-axe was originally the property of a goddess by evidence of its use outside Crete in this capacity, even when it has become predominantly the attribute of the heaven-god, her partner. Further, we should expect to find traces of the presence of the goddess when the axe has been replaced by the thunder-bolt. Lastly, if the double-axe in reality denoted a deity regarded as uniting male and female elements, we may look for some reflection of this belief on the monuments where the symbol and its developments occur.

a) *The Double-axe as the Property of a Goddess.*

Double-axes of geometric date were discovered in the shrine of Artemis Orthia at Sparta; similar offerings were made to Artemis of Lusoi.² An inscription of the third century B.C. from the Asclepieum of Cos mentions a double-axe as a holy implement used in the service of Demeter.³ The local Demeter of Mostene in Lydia⁴ bears the double-axe, as does the divine

ultimate and fundamental fact of the divine life: the god and the goddess, the Son and the Maiden, are mere appearances of the real and single divine life that underlies them."

¹ Evidence that the Mother as the original deity was regarded as controlling heaven as well as earth may, perhaps, be found in the shadowy and purely theological nature of the Babylonian heaven-god, Anu, who has no great local cult except at Erech, the cult-centre of the mother-goddess. Compare also titles like that given to the Sumerian mother-goddess, *gašan anna gašan an-ki-a-ge*, "The heavenly queen, queen of heaven and earth" (Langdon, *Tammuz and Ishtar*, p. 88, who, however, explains the title 'queen of heaven' as merely theological and secondary, ultimately meaning the female principle of Anu, the heaven-god). As to the solar power of the Minoan goddess, consult Evans, *Palace of Minos*, p. 479. For evidence of the power of mother-goddesses over the heavens, compare the Egyptian Isis and Hathor, examples which may have exercised influence on Crete. See *Palace of Minos*, p. 509 f., and Roeder in Pauly-Wissowa, *Realencycl. s.v. Isis*, p. 2101.

² *B.S.A. XIII*, 1906-1907, p. 116, fig. 6e; *Jh. Oest. Arch. I.* IV, 1901, p. 49, figs. 67-68; Schweitzer, *op. cit.* p. 38.

³ Schweitzer, *loc. cit.*

⁴ *Brit. Mus. Cat. Lydia*, p. LXXVI and pl. XVII, 9.

horseman also worshipped in the town. The city-goddesses of Nysa in Caria and Anazarbus in Cilicia¹ follow her example. On an alliance coin of Thyatira and Smyrna, Smyrna is represented as an Amazon holding the double-axe and pelta.² Another coin of Thyatira³ shows on the reverse a standing Amazon, clad in a short double chiton. Her right hand holds a spear, her left, the double-axe.

The ordinary type of double-axe was usually replaced in representations of the Amazons during classical times by the *sagaris*, a sort of pickaxe ascribed to them by Xenophon.⁴ Near Dindymus flowed the river *Sangarius*, whose daughter was, according to one version,⁵ the mother of Attis.⁶ The river derived its name from *Sagaris*, son of Mygdon, who maddened by Cybele for despising her rites, sought death in its waters.⁷ Lastly, the nymph *Sagaritis* was the cause of the unfaithfulness of Attis, at

¹ Imhoof-Blumer, *Lydische Stadtmünzen*, p. 110, No. 16; *Kleinasiatische Münzen*, 433, No. 7. Cf. Ioannes Schäfer, *De Iove apud Cares culto* (Diss. Hal. XX, 1912), p. 369, n. 1.

² *Brit. Mus. Cat. Lydia*, p. 321 (Gordianus Pius). On coins of the Roman Empire, the eponyms of many cities of Asia Minor are represented as Amazons armed with the double-axe. So Smyrna (W. Leonhard, *Hettiter u. Amazonen* (1911), p. 71, n. 4); Cyme (*Brit. Mus. Cat. Troas*, p. 121, pl. XXIV, 3); Aegae (Mionnet III, p. 3, No. 9), Klügmann, 'Ueber die Amazonen d. kleinasi. Städte', *Philologus*, XXX, 1870, p. 545; Phocaea (*Brit. Mus. Cat. Ionia*, p. 225, No. 152); Magnesia ad Sipylum (Klügmann, *op. cit.* p. 530); Cibra (*Brit. Mus. Cat. Phrygia*, p. 140, No. 52, pl. XVII, 5); Ancyra (*Brit. Mus. Cat. Galatia*, p. 9, No. 6, pl. II, 4); Mazaca (Leonhard, *op. cit.* p. 75).

³ Imhoof-Blumer, *Lydische Stadtmünzen*, pl. VI, 29; type identical with that of Smyrna on coins of Domitian's time. The city-god of Thyatira, a combination of Apollo and Tyrimnus, bears the double-axe (*op. cit.* p. 151). A female rider, carrying the double-axe, is found on coins of Apollonia Salbace (*Brit. Mus. Cat. Caria*, p. 54, 2). The reverse of a coin of Heraclea Salbace (*R. Num.* XVI, 1851, p. 242) shows an Amazon, with patera in right hand and bipennis in left, standing between Artemis and a veiled goddess.

⁴ *Anab.* IV, 4, 16; Leonhard, *op. cit.* p. 117; see also *infra*, p. 39.

⁵ Arnob. *Adv. nat.* 5, 6.

⁶ It is possible that Cybele was called Dindymene because the double-peaked mountain symbolized to the ancients, like the double-axe, the twofold nature of the goddess. For a different explanation, cf. Eisler, 'Kuba-Kybele' (*Philologus*, LXVIII, 1909, p. 190, n. 202). The name Cybele itself is derived by Eisler (*op. cit.* p. 126, n. 27) from κυβηλῆς ὁ μαντικός πῆδεκς (*Etym. Magn.* 542, n. 47). Cf. also Sittig, *De Graecorum nominibus theophoris* (Diss. Hal. XX, 1912), p. 148.

⁷ Plut. *De fluviis*, 12, 1.

once divine son and divine lover, to the goddess-mother.¹ Heracles gave the *labrys* he had captured from the queen of the Amazons to Omphale² who by her very name, the Naval Stone,³ shows her connection with the Great Goddess. According to Appian (*De Bell. Civ.* 1, 97), Sulla dedicated to the goddess Aphrodite at Aprodiasias a golden wreath and an axe. The axe bore this inscription: Τόνδε σοι αὐτοκράτωρ Σύλλας ἀνέθηκ', Ἀφροδίτῃ, ὧς εἶδον κατ' ὄνειρον ἀνὰ στρατιὴν διέπουσαν Τεύχεσι τοῖς Ἄρεος μαρναμένην ἔνοπλον.⁴

b) *The presence of the goddess is manifest even when the axe has been replaced by the thunderbolt.*

Athena⁵ bears the thunderbolt on coins of Athens, Syracuse, Epirus, the Locrians, and Macedonia,⁶ as well as on coins of Domitian and on those of the kings of the house of Antigonus. In the *Eumenides*, she declares that she alone knows the way to the chamber where the lightning is kept.⁷ Her head occurs on the obverse with the bolt as the reverse-type on coins of Olympus,⁸ Metropolis in Ionia,⁹ Parium,¹⁰ Lesbos,¹¹ and Amastris.¹² Similarly, Iuno Caelestis is armed with the bolt on Carthaginian coins.¹³

On the coins of Marium in Cyprus,¹⁴ the head of Aphrodite on

¹ Ov. *Fast.* IV, 221 ff.

² Plut., *Quaest. Gr.* 45, 301 F. Captured from Omphale's degenerate descendant, Candaules, the axe, according to Plutarch, was conferred upon the image of Zeus 'Labrandeus.'

³ Eisler, *op. cit.* p. 139.

⁴ Cf. *Brit. Mus. Cat. Caria*, p. 39, No. 89 (reverse-type=axe bound with fillet); as obverse-type, cf. coins of Plarasa and Aphrodisias (*Brit. Mus. Cat.* p. 25, No. 1).

⁵ Roscher, *Lex. Myth.*, s.v. *Athene*, p. 677.

⁶ Preller, *Gr. Myth.*⁴ 1, p. 215.

⁷ Ll. 827 ff.

⁸ *Brit. Mus. Cat. Lycia*, p. lxvi.

⁹ *Brit. Mus. Cat. Ionia*, p. 175, No. 1.

¹⁰ *Brit. Mus. Cat. Mysia*, p. 100, No. 64.

¹¹ *Brit. Mus. Cat. Troas*, etc., p. 171, No. 1. The coins of Seleucia Pieria, where Appian tells us (*Syr.* 58); the thunderbolt was worshipped, present the Tyche of Seleucia for the obverse, with the thunderbolt on the reverse. Lajard (*Culte de Vénus*, pl. V, No. 5), gives a coin of Gabala, a middle bronze of the reign of Commodus, on which to the right is seen a seated goddess with turreted crown and horn of plenty, while beside her stands another, armed with shield and bipennis, with the foreparts of two horses protruding at her feet. See Mionnet, *Description de Méd. ant.* V, p. 236, No. 640.

¹² *Brit. Mus. Cat. Pontus, Paphlagonia*, etc., p. 84, No. 4, pl. XIX, No. 5.

¹³ Roscher, *Lex. Myth.* II, 1, p. 613.

¹⁴ *Brit. Mus. Cat. Cyprus*, p. lxi.

the obverse corresponds to the bolt on the reverse; in the Pisidian city of Cremna, the head of Artemis is used for the obverse; ¹ at Lampsacus, ² we find on the obverse the head of the veiled Demeter, and on the reverse the bolt with the forepart of a winged horse beneath it; in Lesbos, ³ a female head of the type of Hera for the obverse with the bolt on the reverse.

An imprecation inscribed upon a grave of Citium in Cyprus mentions not only the thunder-god, Keraunios, but the thunder-goddess, Keraunia. ⁴

c) *The deity of the double-axe appears in double form* on the coins of Tenedos ⁵ where janiform heads, one male and one female, occupy the obverse, while the double-axe is represented on the reverse (Fig. 2). On the only exception, ⁶ a female head identified as Artemis, a form of the mother-goddess, is substituted on the obverse.



FIGURE 2.—COIN OF TENEDOS.

A few examples which may properly be called bisexual appear. J. T. Wood (*Discoveries at Ephesus*, p. 270, fig. B; cf. p. 271, and Schäfer, *op. cit.* p. 353) cites a small marble statuette from Mylasa which exhibits a figure very like that of Zeus Labrandus, holding a staff and a double-axe. The many breasts of the divinity prove its androgynous nature. The same Zeus, this time in a tetrastyle temple, adorns a coin of Mylasa of the time of Geta. ⁷ Near the temple of Athena Alea at Tegea, Ada and Idrieus, brother and sister of Mausolus and Artemisia, erected a marble stele ⁸ representing a Zeus holding spear and bipennis. The six breasts of this figure relate it to those previously discussed. Other indications that the wielder of the double-axe was sometimes of double

¹ Bri'. *Mus. Cat. Lycia, Pamphylia, and Pisidia*, p. 302, 1B.

² Brit. *Mus. Cat. Mysia*, p. 87, No. 74.

³ Brit. *Mus. Cat. Troas*, etc., p. 171, No. 2.

⁴ Le Bas-Waddington, VII, N. 2739, *Explic.* p. 635; Usener, *Rh. Mus.* LX, 1905, p. 14.

⁵ Cf. 'The Meaning of the Dokana', *A. J. A.* XXIII, 1919, p. 10.

⁶ Brit. *Mus. Cat. Troas, Aeolis, and Lesbos*, p. 93, pl. XVII, 11.

⁷ Foucart, *Des associations religieuses chez les Grecs*, p. 106 f., and 'The Meaning of the Dokana', p. 10, n. For other examples see *Mon. Piot*, XVIII, 1910, pp. 164 f.

⁸ *Mon. Piot*, XVIII, 1910, pp. 145 ff.

sex are afforded by the coins of Euromus¹ and by a small stèle found near Nacoleia.²

More natural, however, than the bizarre concept of a deity who unites in a single person the attributes of both sexes, and more developed than the simple thought of a virgin mother with her divine son, is the idea of a division of the divine nature between a god and a goddess who, together with their child, form a natural trinity, glorifying and repeating on their divine plane the life of the human family.³

That such a process has often actually taken place, numerous myths and cult-practices will testify. At times in such a combination the male element, father-son, will predominate; under other circumstances the original preëminence of the female (mother-daughter) is retained.⁴

With the accentuation of the paternal element in the combination, it would be natural that the double-axe should pass to the Great Father and that with it he should usurp the functions of thunder-god. A transition stage, in which the subordination of the male wielder of the axe to the Great Mother is still apparent, is perhaps indicated by the rock carvings at Boghaz Keui⁵ in his smaller size and modest position behind the female divinity. Sandas, the Cilician god of the double-axe, is also related rather to the Hittite son-god than to the father-god,⁶ whereas in Jupiter Dolichenus the concept of the father-god probably predominates.⁷

When the two sexes have been distinctly individualized, the idea of the union between them, by which all life is rendered possible, is often expressed by an *ιερὸς γάμος*. Since, however, the sky-god frequently assumes as his particular attribute the

¹ Schäfer, p. 357; *Mon. Piot*, XVIII, 1910, p. 162; *Brit. Mus. Cat., Caria*, p. 100, pl. 17, No. 8.

² *J.H.S.* V, 1884, p. 257.

³ Cf. Ramsay, *Cities and Bishoprics of Phrygia*, II, p. 357: "The Carian type of Zeus . . . was an androgynous conception, corresponding to that double character of the divine nature, which was more commonly represented, even in Caria, by the divine pair. . . ."

⁴ Ramsay in Hastings' *Dict. of the Bible*, extra vol. p. 122.

⁵ J. Garstang, *The Land of the Hittites*, p. 214, pl. 65. For similar evidence of the subordination of the axe-god to the Great Mother, see Schweitzer *op. cit.* figs. 5 and 6, and p. 33.

⁶ Cook, *Zeus, A Study in Ancient Religion*, I, p. 598; Garstang, *op. cit.* pp. 195, 238, 240.

⁷ A. H. Kan, *De Iovis Dolicheni Cultu*, 1901, pp. 2 ff.; Cook, *op. cit.* p. 604; Frazer, *Adonis, Attis, Osiris*, I, p. 136.

double-axe,¹ it becomes possible to present in a cruder manner the concept of the fertilization of the earth by the bolt of the divine Father.

On a series of vases discussed by Furtwängler,² the gigantic bust of the earth-goddess rising from the earth is attacked by two men, usually represented as satyrs, who smite the head of the colossus with vigorous hammer-strokes (Fig. 3). Furtwängler's interpretation³ is in the main that which I have suggested: "Die Schilderung der Ilias, wo Zeus die Hera züchtigt



FIGURE 3.—EARTH-GODDESS ATTACKED BY SATYRS.

und mit Schlägen geißelt (*Il.* 15, 17) wie die Erde mit Blitzen, hat gewiss einen mythischen Hintergrund. Die Vorstellung aber, die hier überall zu Grunde liegt, ist die eines die Erde mit Unwetter bestürmenden und so die Spröde erweichenden Himmels-gottes. Und dieselbe Idee muss unseren Vasen zu Grunde liegen; durch mächtige Schläge wird die grosse Göttin nach winterlicher Erstarrung im Frühjahr erweicht." A very interesting parallel to the series examined by Furtwängler occurs on a vase at Oxford (cited in *Jb. Arch. I.* XXVI, 1911, pp. 108 f., fig. 38), where the painter has represented Pandora, half-risen from the earth, extending her hands to Epimetheus who, with his hammer, advances to meet her. Above her head flits an Eros (Fig. 4).

In such a concept lies, I think, the explanation of certain curious coin-types of Caria and Lycia. A coin of Aphrodisias⁴ shows

¹ Cf. *astro-pelēki*, the modern Greek term for lightning.

² *Jb. Arch. I.* VI, 1891, pp. 112 ff.

³ *Jb. Arch. I.* VI, 1891, p. 117.

⁴ *Brit. Mus. Cat. Caria*, pl. VI, No. 7.

on the reverse a leafless tree-trunk from which sprout three branches. On either side appears a nude man with Phrygian cap. The one on the left strikes at the tree with an axe, while the other kneels on one knee or runs away in fright. One of the vases mentioned above shows a Silenus about to run in similar terror from the colossus of the earth-goddess.¹

The reverse of a coin of Myra Lyciae² makes the idea still clearer, for in the tree stands the cultus-image of a goddess (Artemis Eleuthera?³) wearing a modius and veil (Fig. 5). She



FIGURE 4.—EPIMETHEUS AND PANDORA: VASE AT OXFORD.

is attacked by two men with double-axes. From the roots of the tree rise two serpents. The subject is perhaps connected with the myth of Myrrha, mother of Adonis, who was changed into a tree, and with the fancied derivation of the place-name ἀπὸ μύρων.⁴

¹ Vase C, Furtwängler, *op. cit.* p. 115.

² *Brit. Mus. Cat. Lycia*, pl. XV, 6 (Gordian III).

³ *Brit. Mus. Cat. Lycia*, p. 71.

⁴ *Brit. Mus. Cat. Lycia*, p. liv.

Both on the vases and on the coins the purpose of the smiters in attacking the mother-goddess is plain. From each side of the colossal head on vase *B* flies an Eros; Myrrha's father cleft her tree with his sword, and the act gave birth to the child Adonis.¹

It is, then, by a curious inverted parallel that, when the prominence of the male god has been fully established, Hephaestus or Prometheus² delivers Zeus of the virgin goddess, Athena, by cleaving his head with an axe. On the other hand, a lingering survival of the destructive fury exercised by the Great Mother toward her lovers may be found in the sacrifice of the bull, symbolizing the heaven-god, a sacrifice regularly accomplished by the double-axe.



FIGURE 5.—COIN OF MYRA
IN LYCIA.

In Crete, the union of the thunder-god with the earth-goddess is as Cook has remarked,³ probably symbolized by the axes embedded in the twin pillars wreathed with foliage on the sarcophagus from Hagia Triada,⁴ and by the votive axes found in the stalactite pillars of the Dictaeon cave where Zeus was doubtless worshipped in his double function of son and lover. It is, perhaps, such a symbol that we should recognize in the "mason's mark" combining a branch (or trident) with the double-axe. The seven-branched tree, called the "*donner-besen*", mentioned by

¹ Hyginus, *Fab.* 58, 251, 271; Serv. on Virg. *Aen.* V, 72.

² Or Hermes or Palaemon (= Hephaestus). See Rapp *s.v.* *Hephaestus*, in Roscher, *Lex. Myth.* pp. 2060 ff.

³ *Transactions*, p. 193.

⁴ Here, however, it should be noted, the axes have a doubled edge on both sides, so that the interpretation of them as representing a single deity is doubtful. It is possible that the pillars here should be regarded rather as the wreathed shafts of the axes themselves (so Evans, *B.S.A.* X, 1903-1904, p. 43, and *Palace of Minos*, p. 439), and that a quadruple or dual cult is indicated by the reduplication of the blades. Paribeni interprets this reduplication as a "kind of perspective rendering of axe-blades set crosswise with edges pointing to the four corners of the earth." (Blinkenberg, *op. cit.* p. 21; Paribeni, *Mon. Ant.* XIX, p. 31). It may be that in this position they were especially effective as a charm to ward off lightning from any quarter. Miss Harrison (*Themis*, p. 162), notes that the obelisks decorated with the "double-double-axes" on the sarcophagus differ in that the one to the right is adorned with cross-stripes and is considerably taller than the plain one on the left. She attributes this to the fact that these obelisks represent male and female potencies.

Blinkenberg¹ as a protection against lightning, may be a relic of the same tradition. In one instance,² it is engraved upon an axe of greenstone.

In art, the concept of the goddess of the double-axe could be expressed in iconic form by a simple duplication. From such a type would be derived the double Athenas seen on the coins of Athens, Lampsacus, Syracuse, and Uxentum;³ the double head of Athena in the Capitoline Museum;⁴ the relief found near Athens representing two statues of Pallas side by side, standing in a double chapel;⁵ the two-bodied Hecates; the two enthroned Cybeles;⁶ the two "Mothers" worshipped at Engyion, Sicily, as Cretan nurses of Zeus,⁷ and many similar examples. As Usener notes,⁸ the older the work, the more complete the likeness of the doubles.

To this sort of doubling would naturally succeed pairs, the members of which differ in attributes and age. Such are the well-known dyad of Demeter and Kore; the Heras at Plataea, characterized as bride and wife;⁹ the two Artemises, Ariste, a goddess of the underworld, and Kalliste, goddess of the full moon;¹⁰ the two Fortunes at Antium, perhaps distinguished as war-goddess and matron.¹¹

When the paternal and maternal sides of the great divinity have been somewhat differentiated, we have seen that either an androgynous image may result, or a janiform head of which the halves differ in sex, as on the coins of Tenedos. Apollo and Artemis form a similar pair.

¹ *Op. cit.* p. 98.

² *Op. cit.* fig. 34.

³ Usener, 'Dreiheit' (*Rh. Mus.* LVIII, 1903), p. 195. For a list of dyads, see de Witte, *Annali*, XXX, 1858, pp. 79 ff.

⁴ Usener, 'Zwillingsbildung' (*Strena Helbigiana*, 1900), p. 328.

⁵ Usener, 'Dreiheit', p. 193; cf. Paus. IX, 17, 3. The statues differ only in one detail of the Gorgoneion.

⁶ *Δρξ. Έφ.* 1890, pp. 1-10, pl. 1, No. 6, p. 4.

⁷ 'Dreiheit', pp. 192 f.

⁸ 'Dreiheit', p. 204.

⁹ Paus. IX, 2, 7.

¹⁰ Paus. I, 29, 2; 'Dreiheit', p. 196.

¹¹ Roscher, *Lex. Myth.* I, 1548. Possibly with these should be grouped two *Παρθέναι* *ἑταίριδες* who sacrificed themselves during the attack of the Boeotian army. (Suidas, s.v. *Παρθέναι*.) Their names, at least, Protogeneia and Pandora, are significant. The White Ladies of Delphi, Athena and Artemis (Diod. 22, Frag. 9, 5; Cic. *de div.* 1, 37, 81) belong in the same category.

With the predominance of the Father, we should expect the development of another double type, this time of two like gods. Such are the double head of the bearded Dionysus in the Vatican,¹ the two images of Heracles on bronze coins of Heraclea,² and the heads of Janus on Etruscan, Campanian and Roman coins, the connection of which the double-axe I have previously attempted to prove.³

In the final stage, these male dyads are distinguished by age or attributes. Usener has pointed to such significant compounds as *Ζηνοποσειδών* in Caria,⁴ *Διόπαν* at Caesarea Panias,⁵ and the Christian *νιοπάτωρ*.

If from the original goddess of the axe a trinity of deities, divine father, mother, and child, was normally evolved, we should conjecture that their sacred symbol would also be tripled, or, in other words, that each of the trinity might be regarded as an axe-deity. Evans sees evidence of a trimorphic cult in the celebrated dove-shrines at Mycenae,⁶ and in the three painted terracotta pillars surmounted by doves from a miniature shrine found at Cnossus.⁷ The dove-goddess and the double-axe appear together in the Shrine of the Double-Axes,⁸ so that the association of the axe and the trinity of columns seems possible.

The conjecture receives some confirmation from a fresco which adorned the northwest hall of the palace at Cnossus. One section⁹ of this fresco displays three wooden columns the sacred character of which is attested by the horns set between their bases. From the woodwork of each capital, protrude four double-axes, two on each side.¹⁰

In the case of such a trinity, the axe is sometimes the emblem of the father-god (Jupiter Dolichenus, the Carian Zeus, Prome-

¹ Usener, 'Zwillingsbildung', p. 331.

² 'Dreiheit,' p. 197; *Brit. Mus. Cat. Italy*, p. 233, No. 56.

³ 'The Meaning of the Dokana,' p. 16.

⁴ *Athen.* II, 42a; VIII, 337c.

⁵ Kaibel, *Epigr.* n. 827.

⁶ *J.H.S.* XXI, 1901, pp. 138 ff.

⁷ *B.S.A.* VIII, 1901-1902, pp. 28 f.; *Palace of Minos*, pp. 222 f.

⁸ *B.S.A.* VIII, fig. 55.

⁹ *B.S.A.* X, 1903-1904, pl. II.

¹⁰ Possibly we should regard the trident as the symbol developed from the *bidens* to serve as the special emblem of the trinity. The thunder-weapon from which the trident is derived is sometimes bifurcal, though its later conventional shape shows three prongs.

theus),¹ sometimes the possession of the deity who represents the son-god (Teschub,² Sandas, Dionysus³).

The "family triad" of Father, Mother, and Child will be found upon analysis at the basis of many of the cults which appear in Hellenic worship.

I. Obviously to such trinities belong the triads:

1. *Demeter, Kore, Pluto*, elder triad at Eleusis; on throne of Amyclaeon Apollo (Paus. III, 19, 4); in a temple of Demeter on the road from Mycenae to Argos (Paus. II, 18, 3). For further references, cf. 'Dreiheit', p. 25.

The child of the Great Mother is often a mere duplication of the Mother herself. So Ka-di is a title used either for the mother or for her son Tammuz; Damu may signify either the son or the mother; Kore and Demeter are really identical. Langdon (*Tammuz and Ishtar*, p. 17) suggests that in the original legend it may have been the Mother herself who yearly died and descended to the world below.

2. *Demeter, Kore, Zeus Bouleus*, who received sacrifice at Myconus on the tenth Lenaeon. J. von Prott (*Leges Graecorum sacrae, Fasc. I, Fasti sacri*, p. 16) explains that among the Ionians this triad corresponds to the Peloponnesian triad Demeter, Kore, Pluto.

3. *Demeter, Clymenus (= Hades), Kore*, chief gods of Hermione (*C.I.G.*, *Pel.* I, 691; *C.I.A.* II, 3, No. 1421).

4. *Demeter, Kore, Zeus Eubuleus*, at Arcesine on Amorgas (*Ath. Mitt.* I, p. 334).

II. As a secondary development, the Goddess-Mother in doubled form may appear with child or spouse:

1. *Demeter, Kore, Ge*, in the temple of Demeter at Patrae (Paus. VII, 21, 12).

2. *Demeter, Kore, Dionysus*, in the temple of Demeter Eleusinia at Thelpusa (Paus. VIII, 25, 3); in Iconium (*C.I.G.* 4000 (III, p. 69)); in the temple of Demeter Prostatia between Sicyon and Phlius (Paus. II, 11, 3); at Epidaurus, (*C.I.G.*, *Pel.*, Nos. 1039, 1040). In Orphic belief, "the earth-goddess was dualized into Demeter and Kore, by whom Zeus begat the horned infant Dionysus."⁴

¹ For the significance of Prometheus see Cook, *Zeus*, I, pp. 323 ff.

² E. Meyer, *Reich u. Kultur der Chetiter*, p. 90.

³ For Dionysus, 'Smiler of Men', represented on coins of Tenedos by the double-axe, cf. Cook, *Zeus*, I, p. 659.

⁴ Cook, *Zeus* I, p. 695.

3. *Zeus, Athena, Hera*, in the Phocicum between Daulis and Delphi (Paus. X, 5, 2).

4. *Jupiter, Juno, Minerva*, the Capitoline triad.

5. *Athena, Amphitrite, Poseidon*, in Corinth (*C.I.G. Pel.*, I, No. 265). The name Amphitrite is, as Gruppe well reminds us,¹ connected with the Cretan goddess Trita, as well as with Triton, son of Poseidon and Amphitrite, and with Tritogeneia, the mysterious title of Athene. Amphitrite, like Athena, is the *paredros* of the deity who was worshipped by the Philistines as Dagon, and in Greek lands became Triton, Apollo Delphinus, Poseidon, Zeus (Gruppe, II, 1202, 1122).²

6. *Demeter, Kore, Artemis*, in the temple of Demeter on the acropolis of Phlius (Paus. II, 13, 5). In such triads, it is probable that the third goddess was a later addition to the pair consisting of mother-daughter. At Antiochia, a monthly sacrifice was offered τοῖς Θε[σ]μ[οφό]ροις καὶ Ἀπρέμει Σωτεί[ραι] (*Inscr. v. Magnesia*, No. 80, 18 f.).

III. Virtually identical with these triads are the cases where the Mother receives worship with two children who represent the male and female halves of her own being. The commonest instance is the triad of

1. *Apollo, Leto, Artemis*.³

IV. Under the probable influence of the patriarchal system, the Father takes the place of the Mother.

1. *Zeus, Apollo, Artemis*. Zeus Acraeus, Apollo Coropaeus, Artemis Iolcia are invoked in the oath of the Magnesians in Thesaly (*Ath. Mitt.* VII, 1882, p. 73); Zeus Sosipolis, Artemis Leucophryene, Apollo Pythius were the city-gods of Magnesia on the Maeander (*Inscr. v. Magnesia* 98, 48 f.); Apollo, Artemis, Zeus

¹ *Gr. Mythol. u. Religionsges.* II, p. 1143, n. 1.

² Cf. the Sumerian mother Nina,—‘lady of waters’. In Sumerian both the mother-goddess and Tammuz are called *ušumgal*, ‘great serpent’.

³ Apollo bears the axe on the coins of Thyatira, Eumeneia, and Hypaepa. (Imhoof-Blumer, *Kleinvas. Mzz.* 1, 173; *Brit. Mus. Cat. Phrygia*, pl. XXVII, 9; *Brit. Mus. Cat. Lydia*, XLI, 5). Coins of Myson Abbatias and Pergamum show an Apollo-head for the obverse-type with a double-axe in a laurel-wreath for the reverse (*Brit. Mus. Cat. Phrygia*, pl. II, 3). It is probable that the god of the *labrys* appears as Apollo, Lairbenos, Sabazios, Men, and Attis, throughout Asia Minor. See Ramsay, *Cities and Bishoprics of Phrygia*, pp. 91, 133, 169. On a Roman bronze medallion from Smyrna, a priest of Apollo Erethemi (= Phoen. Resceph) appears with the double-axe, Schweitzer, *op. cit.* p. 31.

Megistus, chief gods of Iasus. (*B.C.H.* V, 1881, 497; *R. Ét. Gr.* VI, p. 156, 1).

2. *Cronus, Hera, Zeus*, images in a temple situated in the grove of Trophonius at Lebadea (*Paus.* IX, 39, 4).

V. Very closely allied are the triads where the Father-Son-god appears in doubled form.

1. *Zeus, Athena, Apollo*, e.g. *Il.* B, 371. For the significance of this triad, see Miss Harrison, *Themis*, pp. 500 ff., who rightly remarks that we have in it a trinity of patriarchal deities, *Phratrion Patrooi*, "projections, representations of patriarchy, pushed to the utmost."

2. *Prometheus, Athena, Hephaestus*, in the Academy. Cf. Apollodorus (Schol. Soph. *O.C.* 56): Συντιμάται δὲ καὶ ἐν Ἀκαδημίᾳ τῇ Ἀθηνᾷ (i.e. ὁ Προμηθεύς), καθάπερ ὁ Ἥφαιστος. Καὶ ἔστιν αὐτοῦ παλαιὸν ἱδρυμα, καὶ βωμός ἐν τῷ τεμένει τῆς θεοῦ. Δείκνυται [δὲ] καὶ βάσις ἀρχαία κατὰ τὴν εἰσοδὸν, ἐν ᾗ τοῦ τε Προμηθεύς ἐστὶ τύπος καὶ τοῦ Ἥφαιστου. Πεποιήται δὲ (ὡς καὶ Λυσιμαχίδης φησὶν) ὁ μὲν Προμηθεύς πρῶτος καὶ πρεσβύτερος, ἐν δεξιᾷ σκῆπτρον ἔχων, ὁ δὲ Ἥφαιστος, νέος καὶ δεύτερος. Καὶ βωμός ἀμφοῖν κοινός ἐστιν ἐν τῇ βάσει ἀποτετυπωμένος.

On Prometheus as an older form of Hephaestus, see Bapp in Roscher's *Lex. Myth.* III, p. 3040. Both Hephaestus and Prometheus are reported to have officiated at the birth of Athena. On Hephaestus as originally the spouse of Athena, cf. Gruppe, *op. cit.* I, p. 27.

VI. Three forms of the Goddess-Mother may be united in a triad:

1. *The Triple Hecate* (e.g. *Aen.* IV, 511).

2. *The Three-Headed Artemis* (*Aen.* IV, 511). For evidence that the Minoan goddess could also appear in tripled form, see Evans, *Palace of Minos*, p. 635.

3. *The Three-Headed Persephone*. See the incantation quoted by Usener, 'Dreiheit', p. 167, where Persephone is called τρικάραν νυχία παρθένε.

4. *The Three Gorgons*. See Ziegler in Pauly-Wissowa, *op. cit.* s.v. *Gorgo*.

5. *Aphrodite, Athena, Artemis*, on the pedestal of the image of Amyclaeon Apollo (*Paus.* III, 19, 4).

6. *Despoina, Demeter, the Great Mother*: To these three, altars were dedicated in front of the temple of Demeter near Megalopolis (*Paus.* VIII, 37, 2 f). Despoina is the designation of deities who are unmistakably forms of the Great Mother, like

Artemis, Athena, Hecate, Cybele. In cult, the name is restricted to chthonic goddesses, and particularly to the Arcadian deity later identified with Kore.¹ Pausanias, on the other hand, distinguishes between Persephone and the Mistress whose mystic name he fears to impart. She is called daughter of Demeter and Poseidon, and the few further facts which Pausanias tells us, such as the union of the Mistress and Demeter in one double statue, and the representation of the Curetes under the images and of the Corybantes on the pedestal, substantiate the theory that the Mistress is a mother-goddess.

VII. Three forms of the Father or Son Gods may likewise be joined in a triad.

1. *Zeus, Poseidon, Hades*, on coins of Mytilene (*Arch. Zeit.* 1851, p. 508; Mionnet, *Descr.* III, 46, No. 102.)

2. The law of Solon prescribed an oath by three gods, sometimes regarded as *Hicesius, Catharsius, Exacester* (Pollux, VIII, 142). These deities are outgrowths of epithets of Zeus. So Zeus Catharsius is found at Olympia (Paus. V, 14, 8); Zeus Hicesius at Thera (*I.G.I.* III, 402 f). Of Exacester or Exacesterius, Hesychius says: 'Ἐξακεστήριος' ὁ Ζεὺς καὶ ἡ Ἥρα. Possibly this deity had a special value to Solon as the son of Exaces-tides.

3. *Erechtheus (Poseidon), Butes, Hephaestus* (Paus. I, 26, 5), worshipped at three altars within the Erechtheum. Cook (*Class. Rev.* XVIII, 1904, p. 85), has shown that Erechtheus was regarded as a title of Zeus; that Butes was the ancestor of the priests of Poseidon-Erechtheus; that Hephaestus, the celestial smith, is also a thunder-god. His conclusion is that the members of this triad are all probably forms of Zeus.

4. *Hermes Τρικέφαλος* (Isaeus in Harpocration, p. 293, 6 (Dind.); Hesychius s.v. Ἑρμῆς Τρικέφαλος; Lycophron, 680).

5. *The Three-Headed Cronus*. Cronus is the son of Gaea and Uranus;² from him and Aphrodite all things are born;³ he is often connected with the goddess of birth. Thus at Olympia the sanctuary of Ilithyia was on Mount Cronius where Cronus was worshipped.⁴

As a result of this investigation, it would seem that Usener's

¹ Kern in Pauly-Wissowa, *op. cit.* s.v. *Despoina*, p. 252.

² Hesiod, *Theog.* 137 f.

³ Theopomp. *Frag.* 293.

⁴ Paus. VI, 20, 1.

dictum¹ that usually not relationship but likeness of function or mere accident lies at the basis of a triad, needs revision. Likeness of function is an important principle, but far more significant is the family union of Father, Mother, Child. In fact, in the case of a matriarchal society, it is probable that the development of a deity like the Earth-Mother took place by the differentiation of functions, so that out of her single person grew first the goddess of Sky and Earth, and then a concept like the triple Hecate.²

Besides the tripling of the axe-symbol and its consequent resolution into a trinity of deities, we must reckon with the retention of the actual axe as an object of worship, together with the anthropomorphizing of its elements. We have seen such a process taking place on the coins of Caria and Tenedos. If, moreover, a consciousness of the fact that the sacred symbol represented both male and female elements persisted, we must admit the possibility of a quadruple cult, including a male deity, a female deity, and a fetish combining the two sexes. A development of this sort is perhaps suggested by the reduplication of the ends of several sacral axes, on the significance of which, as indicating in his opinion a *dual* cult, Evans has remarked.³

A combination so complicated as this would of course be capable of endless variations. As mother-goddess and father-god each retained the double-axe for an attribute,⁴ we may infer that

¹ 'Dreiheit', p. 35.

² Usener has given an illuminating analysis of the development of the triad in Christianity. As he remarks, it illustrates, first, the almost irresistible tendency toward the formation of a trinity which seems inherent in human nature. The New Testament gives us only the dyad of Father and Son. To this the rite of baptism added the Holy Spirit, and the accident of Aramaic gender caused this Holy Spirit to become in popular belief the mother of Christ. (For a criticism of this view, see Clemen, *Primitive Christianity and its non-Jewish Sources*, tr. 1912, p. 206.) The gospel of John introduced the conception of the Paraclete, thus forming a triad of three males. That this in turn could be resolved is proved by the Apostolic Canon forbidding bishop or presbyter to baptise by three Fathers, Sons, or Paracletes. Finally, the growing importance of the Virgin attests the continued faith in the Great Mother which lingered among the people, while the popular tendency to the "basic triad" is shown by the further grouping *Jesus, Mary, Joseph*.

³ *B.S.A.* VIII, figs. 57, 59, 61, and pp. 101 f.; cf. Milani, *St. M.* I, pp. 197 f. for a different theory, involving a quadruple cult. For the use of the quadruple combination of axe-blades as a decorative symbol, see Evans, *Palace of Minos*, p. 583. On the inscription from Iconium (l. 15), Kore is called *Τετρακώρη*.

⁴ Compare with the coins of Tenedos the statement of Apostolius (16, 26), that the Tenedians honor two axes. See also Macarius, 8, 7.

each of the four divinities of the possible quadruple cult might be represented by the same sacred sign, remembering in this connection the four double-axes attached to the pillars of the fresco-shrine, and the clay seal impression from the Room of the Archives at Cnossus on which four double-axes are grouped round a rosette.¹

I have suggested, first, that the evidence at our command would indicate that the double-axe, before it became the property of the thunder-god, belonged to the great earth-goddess, and that its form symbolized the union in her of male and female elements. Second, I have discussed the double-axe as a symbol of the *ἱερός γάμος* between the goddess and her consort. Thirdly, I have enumerated some of the types to which the double-axe might give rise in art: the simple doubling of a female deity; the differentiation on the basis of sex; the development of a male type similarly doubled; and the tripling of the axe-symbol together with the evolution of the sacred family-trinity. I have suggested also the possibility of further and more complicated combinations involving a quadruple cult.

All these suggestions will, I think, prove of use in dealing with perhaps the most mysterious cult of antiquity,—that of the Cabiri or Megaloi Theoi,—for here, too, we shall find traces of the worship of the Sacred Axe.

Lemnos. Aeschylus, the first authority to mention the Cabiri, appears to have described them on Lemnos as friendly and subordinate demons of fertility.² The logographer, Pherecydes of Leros,³ asserts that Hephaestus, chief god of Lemnos, was the father of the three Cabiri and the three Cabiric nymphs by Cabiro, daughter of Proteus, whereas his contemporary, Acusilaus of Argos, attributes their paternity to Cadmilus or Camillus, himself the son of Hephaestus and Cabiro.

Samothrace. From Samothrace, in Hellenistic times the most prominent centre of the Cabiric mysteries, we derive the most satisfactory ancient account of the nature of the Cabiri. We owe the information to the scholiast on Apollonius Rhodius I, 917: *μουνοῦνται δὲ ἐν τῇ Σαμοθράκῃ τοῖς Καβείροις, ὡς Μναστέας φησί. καὶ τὰ ὀνόματα αὐτῶν ὁ τὸν ἀριθμὸν, Ἀξίερος Ἀξιόκερσα Ἀξιόκερσος.*

¹ B.S.A. VIII, fig. 61.

² Nauck, *Trag. Graec. Frag.* pp. 31 f.

³ Strabo, X, p. 472.

'Αξιέρος μὲν οὖν ἔστιν ἡ Δημήτηρ, 'Αξιοκέρσα δὲ ἡ Περσεφόνη, 'Αξιοκέρσος δὲ ὁ 'Αΐδης. ὁ δὲ προστιθέμενος τέταρτος Κάσμιλος ὁ 'Ερμῆς ἔστιν, ὡς ἱστορεῖ Διονυσόδωρος. . . . οἱ δὲ δύο εἶναι τοὺς Καβείρους φασὶ πρότερον, πρεσβύτερον μὲν Δία, νεώτερον δὲ Διόνυσον. To this information, the *Etymologicum Gudianum* adds: Κάβιροι δὲ εἰσι δαίμονες περὶ τὴν 'Ρέαν οἰκήσαντες τὴν Σαμοθράκην. Pliny, on the other hand, speaks¹ of Aphrodite and Pothos, *qui Samothrace sanctissimis caerimoniis coluntur*. Lastly, to add to the confusion, in Hellenistic days the Cabiri of Samothrace were identified with the Dioscuri.²

Imbros. On Imbros, the Cabiri were, according to Friedrich,³ associated with the Carian Hermes Imbramos or Casmilus, who, however, probably occupied a separate shrine.

Macedonia. In the cult of Macedonia, appear three Corybantic brothers, the most important of whom, *the Cabirus, par excellence*, was murdered by the other two. The assassins buried the head under Mount Olympus, but transported the *penis* in a *cista* to Etruria.⁴

Pergamum. "The country of the Pergamenes was of old, say they, sacred to the Cabiri," reports Pausanias.⁵ Aristides calls the Cabiri the oldest deities of Pergamum,⁶ and an oracle of Antoninian date declares that at Pergamum the Cabiri, sons of Uranus, discovered the infant Zeus.⁷

Miletus. At Miletus, a curious legend was told⁸ of two youths from Phrygia, Tottes and Onnes, who brought help to the city, *ἱερὰ ἔχοντες τῶν Καβείρων ἐν κίστῃ κεκαλυμμένα*.

Thebes. On the mainland of Greece, Thebes was the only city in which the Cabiric worship attained a prominent place, though Pausanias⁹ gives us a significant notice in regard to Anthedon where there was a shrine and grove of the Cabiri near the temple of Demeter and the Maid. Near Thebes, Pausanias¹⁰ saw a

¹ N. H. XXXVI, 25.

² Diod. IV, 43; C.I.G. 2296; B.C.H. VII, 339, 4; 340, 5; 337, 3; *Orphic Hymn* XXXVIII; Serv. ad *Aen.* III, 12.

³ *Ath. Mitt.* XXXIII, 1908, p. 100. Cf. Steph. Byz.: "Ἰμβρος νῆσός ἐστι Θράκης, ἱερὰ Καβείρων καὶ Ἑρμοῦ ὃν Ἰμβραμον λέγουσιν οἱ Κἄρες.

⁴ Clem. Alex. *Protr.* 19.

⁵ I, 4, 6.

⁶ *Or.* LIII, ii, 469, Keil.

⁷ *Inscr. v. Pergamum*, II, p. 239.

⁸ *F.H.G.* III, 388, fr. 54.

⁹ IX, 22, 5.

¹⁰ IX, 25, 5.

grove of Demeter Cabiria and Kore, though the actual shrine of the Cabiri lay distant seven stades. An ancient city on the site, Pausanias further informs us, was inhabited by people called Cabiri, to one of whom, Prometheus, and his son Aetnaeus, Demeter revealed herself and committed a sacred trust. Despite the fact that Pausanias uses the plural in speaking of the Theban Cabiri, the dedicatory inscriptions are addressed in the singular, to "the Cabirus". This Cabirus, identified with Dionysus, as the offerings show, was worshipped with a divine child, ὁ παῖς τοῦ Καβείρου.

The complicated reports of ancient authorities and the other evidence which has come down to us may, perhaps, be summarized as follows:

(1) No definite number was associated with the Cabiri. They appeared as four (on Samothrace, according to Dionysodorus); as three (on Samothrace, before the addition of Casmilus; on Lemnos, if Pherecydes and Acusilaus are to be believed; in Macedonia, though here the third brother is *the* Cabirus); as two (on Samothrace, according to some authorities; on Lemnos, as numismatic evidence proves;¹ in Miletus, if Tottes and Onnes were Cabiri; in Thebes, if the *pais* is to be reckoned as a Cabir). One Cabir was predominant in the cults of Thebes and Macedonia. Furthermore, the Cabiri were at times conceived merely as an indefinite number of πρόπολοι, as at Lemnos, if Aeschylus formed his chorus from them, and at Samothrace, if the account in the *Etymologicum Gudianum* is correct.

(2) When the Cabiri appear as two, they may differ in age, as at Thebes and Lemnos, or they may be represented, like the Dioscuri, as twins.

(3) The Cabiri are associated particularly with Hephaestus (on Lemnos), Dionysus (in Thebes and Samothrace), and the Great Mother in her various manifestations (in Thebes and Samothrace; cf. the representation of the Curetes and Corybantes in connection with the images of Demeter and Despoina in the temple near Megalopolis²).

(4) They are identified and confused with various other attend-

¹ For an older and a younger Cabir on the coins of Lemnos, see v. Fritze *Zeitschr. f. Numism.* XXIV, 1904, 117, taf. v, Nos. 14 and 15.

² See above, p. 43.

ant deities, such as the Curetes, the Corybantes, the Dioscuri, the Idaean Dactyls, the Telchines,¹ and the Titans.²

In attempting to draw conclusions from this mass of evidence, let me turn first to the most interesting and probably most reliable ancient account, that of the scholiast on Apollonius Rhodius.³ Here, though the scholiast knows of the existence of four Cabiri, he mentions at first only three, adding to these on the authority of Dionysodorus,⁴ the fourth, Casmilus or Hermes.

The names of the three, probably earlier and more important Cabiri,—Axieros, Axiokersos, and Axiokersa,—are highly significant. Recent investigations into the nature of the Cabiri enable us to interpret Axieros as the sacred Axe,⁵ and Axiokersos and Axiokersa as the male and female divinities derived from the original fetish.⁶ Axieros, says the scholiast, is Demeter,

¹ Strabo, X, 3, 7, p. 466.

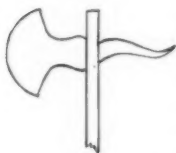
² Photius s.v. Κάβειροι; C.I.G. 3538.

³ I, 917.

⁴ The first part of the account is incorrectly attributed to Mnaseas of Patara. For a full discussion of the question, see Pettazzoni, 'Le origini dei Kabiri nelle isole del Mar Tracio' (*Mem. Acc. Lincei*, Serie Quinta, XII, 1909, p. 651 ff.). Perhaps, therefore, Dionysodorus was responsible for both statements.

⁵ Schweitzer, *op. cit.* p. 41, explains ἄξινη as the single-, not the double-axe. That it differed from the πέλκευς is clear, but the definition of Hesychius who calls it δίστομος πέλκευς would seem decisive. Herodotus (VII, 64) may, perhaps, furnish a clue, for he enumerates among the weapons of the Scythians ἄξινας σάγαρις, defining the foreign word by a Greek synonym. The σάγαρις, as we have seen (p. 31), is the weapon of the Amazons, who are depicted as armed now with a double-axe, again with an axe of which one side is a curved pick. Yet an epigram (*A. P.* VI, 94) which describes various offerings made to Cybele numbers among these σάγαριν ἀμφύθητα. We may infer, then, that both the ἄξινη and the σάγαρις could vary in form, being sometimes double-edged and sometimes of the pickaxe shape. So Dionysus is called πέλκευς, but also ἄξιος ταῦρος.

⁶ Several suggestions in this direction have been made. Thus Bloch in his article on *Megaloi Theoi* in Roscher's *Lex. Myth.* p. 2526, suggests ἱερὸς as the last part of the compound Axieros. Milani in the course of his brilliant but frequently erratic series of articles ('I Dattili d'Ilio', in *Studi e Materiali di archeologia e numismatica*, III, 1905, p. 283) declares: "In Samotracia, a Imbro e Lemno, primo Dattilo è 'Ἀξίερος, l' ἄξινη ed ἄξων del mondo (= Imbramos); secondo Dattilo 'Ἀξιδέρος, la folgore, il fuoco (= Hephaistos-Kadmilos), terzo Dattilo 'Ἀξιοκέρσα, la terra colpita o animata dall'asta o dalla folgore cosmica (= Γημήτηρ o Demeter)". Apparently unaware of Milani's conjectures, Cook in the *Transactions of the Third International Congress for*



(i.e. the Great Mother in fetish form); Axiokersa is Persephone, (her daughter and double); Axiokersos is Hades (the male half of Persephone).¹

As has been frequently noticed, two glosses of Hesychius assist us in discovering the meaning of Axiokersos and Axiokersa. *Κέρσαι* he defines by *τεμείν, κόψαι, γαμήσαι*, and *κέρσης* by *γάμος*. It would seem, then, that the two divinities are primarily "He that smiteth with the axe," and "She that smiteth with the axe." That an *ἱερὸς γάμος* could be symbolized by the stroke of the lightning which cleaves the earth, I have noted above. This would explain the secondary definition, *γαμήσαι*, and would admit the possibility that Axiokersos and Axiokersa, as Cook suggests, might later become a pair of deities united in sacred marriage, so that Axiokersa would ultimately be regarded as a passive epithet, "She who is smitten."²

But on the authority of Dionysodorus, the scholiast reports a fourth Cabir on Samothrace,—Casmilus or Hermes. From the phrasing of the statement, this deity would seem to be a comparatively late and subordinate addition to the triad, an impression which is confirmed by Varro's words: *Casmil[l]us nominatur*

the History of Religions, II, p. 194, acutely remarks: "May we not venture to suppose that 'Ἀξιώκερος, "He who cleaves with the axe," and 'Ἀξιοκέρσα, "She who is cleft with the axe" are early titles for the Bridegroom and the Bride? At least the derivation from *ἄξελ*, "an axe", and *κέρσαι*, "to cleave" seems clear enough." It will be noted that both Cook and Milani translate Axiokersos actively and Axiokersa passively, a dangerous procedure. More correct is Eisler ('Kuba-Kybele', *Philologus* LXVIII, 1909, p. 178, n. 175), who appears to imagine that he is translating Cook. ". . . 'Ἀξιώκερος und 'Ἀξιοκέρσα (Axt-hauer und Axt-hauerin, A. B. Cook) und Axieros (heilige Axt schlechthin)". He then explains the triad as "Zeus Παράς, Attis und Kybele,—Aiva, Turk-Teisbas und Pō." As my own interpretation differs from any of those cited, and as I reached my conclusion independently, my results may, perhaps, have an interest of their own.

¹ It is rather interesting to remember that the old oath of Solon inscribed on wooden pillars, was an oath by the *τρεῖς θεοί*, Hicesius, Catharsius, and Exacester, and that Cook has conjectured that these pillars represented in reality the triple Zeus. (*Class. Rev.* XVIII, 1904, pp. 85 f.). Is, then, their name, *ἄξιοι*, significant, and also the term for the later prisms which replaced them,—*κύρβεις*? (cf. *κύρβας* = Assy. *kurubu*, "mighty", and "Cabiri", "Megaloï Theoi". See Eisler, *op. cit.* p. 173, n. 164). The *κύρβεις* were the discovery of the Cretan Corybants (Theophr. Porph. *Abst.* 2, 21; Schol. *Aves*, 1354; Phot. *s.v.* *κύρβεις*).

² So Caelum and Terra are identified with the "Di Magni". (Serv. on *Aen.* III, 12).

*Samothrace[s] mysteriis diis quidam amminister diis magnis.*¹ His presence may be explained on the theory that the triad of the Double-Axe and its anthropomorphized representatives at times developed into a quadruple cult by the recognition of the fetish itself as a deity combining male and female elements and, therefore, resolvable into two separate divinities, a male and a female. That such a process was taking place is proved in the cult of Samothrace by the identification of Axieros with Demeter. The next step would be the addition of the divine Son or Lover, Casmilus, differentiated from Axiokersos by his age.²

The combination of this divine Son with the divine Father would account for the deities worshipped on Samothrace as Dionysus and Zeus, and at Thebes as Dionysus-Cabirus and ὁ παῖς.³

Other trinities might be formed from the group. The Chablais marble in the Vatican⁴ represents a term with three faces,—Axiokersos, Axiokersa, Casmilus,—resembling the types of Dionysus, Kore, and Hermes,—while beneath they are interpreted by figures of Apollo, Aphrodite, and Eros, the last of whom we have seen issuing from the head of Mother Earth.

A later development would be represented by the report in the *Etymologicum Gudianum* according to which the Cabiri were regarded merely as the attendants of the Great Mother or primal deity of the Axe. At Thebes we may remember the significant combination which appears in the name Demeter Cabiria. Lemnos also recalls the deities of the Axe. Hephaestus, father of the Lemnian Cabiri, carries as his attribute the hammer, in some cases the double-axe.⁵ Suggestive, also is Pliny's mention

¹ *Ling. Lat.* VII, 103. So the Gnostics worshipped Father, Mother, Son, and Christ, their messenger. Legge, *Forerunners and Rivals of Christianity*, II, pp. 64 ff.

² The combination of the Great Goddess and her Lover probably appears in Pliny's account of the statues of Aphrodite and Pothos which Scopas made for Samothrace.

³ Compare the statues of Prometheus and Hephaestus in the Academy, similarly differentiated in age. (See p. 42.)

⁴ Gerhard, *Ant. Bildw.* pl. 41. Kern in his article 'Kabeiros und Kabeiroi' (Pauly-Wissowa, *Realencycl.* p. 1447), doubts the identification of the figures on the Chablais marble with the Cabiri. It is accepted by Furtwängler (Roscher's *Lex. Myth.* I, 1341), and Walters (*J.H.S.* XIII, 1892-3, p. 85).

⁵ L. von Schroeder, *Griechische Götter u. Heroen*, erstes Heft, *Aphrodite, Eros, u. Hephästos*, p. 88; Cook, *Zeus*, I, p. 216, n. 2. Velchanus has the double-axe on a Cretan inscription discovered by Halbherr (Farnell, *op. cit.* 389, n. a). With the Cabiri as πρόπολοι, cf. the Maruts, attendants of

of a labyrinth on Lemnos.¹ Cabiro, wife of Hephaestus on Lemnos, is plainly 'The Cabira', the Great Mother.

We have now attempted to explain the origin of the Cabiri conceived as (1) a trinity, (2) a group of four deities, (3) two male deities differing in age, (4) an indefinite number of *propoloi*.

As we noted, the Great Gods received worship also as twin brethren identified with the Dioscuri. This aspect of their cult deserves particular attention, because it involves a triad of peculiar nature.

I have previously² tried to show how the divinity of the double-axe was frequently accompanied by twin assessors, perhaps derived from the sacred posts of a shrine, and how these twin fetishes may have developed into the Dioscuri. To call such a collocation of deities a triad would be misleading. It differs from the examples we have been discussing because of the supreme importance of the central figure, and the subordinate character of the other two, who resemble each other,³ but not the greater deity. That at times this group might become confused with a genuine triad, I shall presently try to prove.

It was probably comparatively late in the history of the Cabiric cults that the Dioscuri or twin assessors of the double-axe became confused with the Cabiri. Fritze⁴ has shown how on coins figuring the Cabiri the type develops in the third century B.C., by the gradual evolution from a Cabiric duality of a bearded man and a youth to a Dioscuric duality of twin youths who finally usurp the Cabiric title of Megaloi Theoi. The development reaches its culmination about 200 B.C.

With the confusion of Dioscuri and Cabiri, a new sort of triad

Indra, described by von Schroeder, *Mysterium und Mimus*, p. 50, as youths of equal age armed as warriors, sometimes with golden axes.

¹ N. H. XXXVI, 90, if, indeed, the report is correct. See Pettazzoni, p. 712, n. 9 and Cook *Zeus*, I, p. 483, n. 12.

² A. J. A. XXIII, 1919, pp. 1 ff.

³ There is, indeed, a possibility that one Dioscur may be a mere duplication of the other, occasioned by the striving for symmetry, as in the cases where Cybele appears with a lion on either side, or, perhaps, by the origin of the Dioscuri in subordinate son-gods, like the Babylonian Tammuz and Ningishida. A connection with twins like Apollo-Artemis might also here be traced, for sometimes Ningishida is represented as female, wife of Tammuz, and sometimes the reverse takes place.

⁴ 'Biryis u. die Kabiren auf Münzen', *Zeitschrift f. Num.* XXIV, 1903, pp. 123 f.

became possible. It manifests itself in the cult of Macedonia and the tale of the three brothers. That this triad is influenced by those in which the central, important figure has as its assessors subordinate twins, is proved by the overwhelming predominance of the third brother, the martyr.¹ He occurs alone on the



FIGURE 6.—COIN OF THESSALONICA.

coins of Thessalonica with the ritual horn, the double-axe or hammer, and the ring round the neck which Prometheus, another Cabir,² also wears (Fig. 6).

A possible ancestor of the third Cabir may be traced in the tale of Trita Aptya recounted in the Rig Veda. Trita is preeminently "the Third", by whose appellation the names of his wicked brothers, Ekata and Dvita, seem to have been suggested.³ Like the third Cabir, Trita was a martyr, pushed by his cruel brothers into a well, from which he later rose victorious by the favor of the gods. In both stories, the brothers are merely foils for the hero. Grimm observes that Odhin too is "the Third One." So Zeus is *σὺν τριτος* (Aes. Suppl. 27; Eum. 760, etc.; Welcker, Aes. Tril. p. 101, n. 122). Here, perhaps, despite the quantity of the first iota, belongs the much-disputed Tritogeneia. Some foundation for the assumption of a doublet *τρίτος-τρίτος* is afforded by words like *τρίνακρῖς*, *τρίνακῆ*, *τρίναξ*, *Θρίνακῆ*, *Θρίναξ*, but later *Θρίναξ*.⁴ If this assumption is correct, *Amphitrite* would mean "She who is preëminently Third."

Modern folklore shows the same emphasis in the many tales of three brothers or sisters, of whom the third and youngest invariably succeeds when the others fail. The principle of climax is, perhaps, sufficient to account for the preference thus given to the third place.⁵

¹ This third Cabir is properly identified by Clement with Dionysus (*Protr.* 2, 19, 1-4, p. 15, 1 ff. (Stählin)).

² Bapp, *loc. cit.* The wife of Prometheus bears the significant name Axiothea.

³ Kuhn in Hofer's *Zeitschrift f. die Wissenschaft d. Sprache*, I, 1846, pp. 289 ff.; Usener, 'Dreiheit', p. 7.

⁴ Düntzer has conjectured (*Zeitsch. für vergleich. Sprachforsch.* XII, 1863, p. 9) that the lengthening of the iota in such compounds as Tritogeneia is purely metrical.

⁵ So Lang, *Introd. to Cinderella*, by M. R. Cox, p. xiii: "The constant preference of the youngest child, boy or girl, might conceivably point to a time

Not invariably, however, is the third place preferred. The Orphics termed Persephone *Μονογένεια*, the "especial" or "single" daughter of Zeus.¹ Possibly an attempt to harmonize the two views may be detected in the Homeric *Hymn to Aphrodite*, 22 ff., where Hestia is called both eldest and youngest daughter of Cronus.²

A combination of a different sort meets us when we consider the Curetes and Corybantes. That both are forms of the father-god is plain from ancient information. In the case of the Corybantes, the male deity manifests himself in his subordinate rôle of partner and attendant. Julian³ speaks of one Corybas whom he calls *ὁ σύνθρονος τῇ Μητρὶ καὶ συνδημιουργῶν*. Cybele, according to Diodorus,⁴ was the mother of this eponymous Corybas by the hero Iasion. In *Orphic Hymn XXXIX*, he appears (in connection with Deo, another aspect of the Mother), as a snake, a shape which was frequently assumed by the consort of the Goddess.

But the Curetes and Corybantes manifest the same instability in numbers which we observed when dealing with the Cabiri. In the very oration which praises the one Corybas, Julian implies that the Corybantes are three.⁵ Frequently regarded as indefinite *πρόπολοι*, the Corybantes became a triple triad,⁶ or seven,⁷ or ten.⁸ Their name, if properly connected with Assyrian *kurubu*, 'great', would again identify them as forms of Zeus Megisteus, attendants of the Great Mother.

The Curetes likewise were forms of Zeus, himself the Koures,

when the youngest child was the heir, as in Borough English: a very widespread custom, . . . Besides, in adventures, if there is to be accumulating interest, someone must fail; the elder sons would attempt the adventure first: consequently the youngest must be the successful hero."

¹ Legge, *op. cit.* I, p. 124. *Μονογενής* is an epithet also of Hecate (Hesiod, *Theog.* 426, 448), and Athena (*Orphic Hymn*, XXXII, 1).

² Hestia herself is, of course, a form of the mother-goddess. It is no accident that Cinderella, Cinderlad, and other worthies are so closely connected with the hearth. They are children of very ancient lineage.

³ *Or.* V, 167b.

⁴ V, 49, 2; Kore according to Serv. *Leid.* on *Virg. Aen.* III, 111.

⁵ 168b: . . . οἱ Κορύβαντες, αἱ τρεῖς ἀρχαὶ τῶν μετὰ θεοὺς κρεσσόνων γενῶν ὑποστάσεις.

⁶ In Orphic-Pythagorean mysticism, the number nine was the *κουρητὶς*.

⁷ Nonnus *Dionysiaca*, XIII, 135 ff.

⁸ Schol. *Plat. Sympos.* 215e; *Suidas s.v.* Κορύβαντες.

or divine youth.¹ The names of the first two of the three Carian Curetes, Panamoros, Labrandos, and Palaxos, or Spalaxos,² are cult-titles of Zeus. Labrandos is of course the god of the double-axe.³



FIGURE 7.—THE THREE DIOSCURIC BROTHERS: ETRUSCAN MIRROR.

With these deities may be compared the three Cabiri of Lemnos, whose feminine counterparts are the three Cabiric nymphs. These in turn remind us of the three dancing maidens who surround the shrines of Hecate,⁴ and sometimes possess the attributes of Hecate herself.

On Etruscan mirrors (Fig. 7), the three

Dioscuric brothers, identified by Gerhard with the three Cabiri,

¹ Miss Harrison, in *B.S.A.* XV, 1908-9, pp. 308 ff.; *Themis*, ch. 1; *Prolegomena*, pp. 499 ff. See also Cook, *Zeus* I, pp. 647 ff.

² *Etym. Mag.* s.v. Εἰδωρος. Cf. also Eisler, *op. cit.* p. 126, n. 27.

³ The Telchines, Dactyls and Titans, though their relation with the Cabiri is more remote than that of the Curetes, Corybants and Dioscuri, were all connected with the deities of the Axe. Thus two of the Telchines, Antaeus and Megalesius, bear names which are really appellations of the Great Mother. Rhea entrusted to their care the infant Poseidon. Strabo identifies the Telchines with the Curetes (X, 472). According to the author of ἡ Τελχινιακή ιστορία (Athen. VII, 282e) they were the sacred fish created from the blood of Uranus together with Aphrodite. On the fish as an emblem of the Mother Goddess, see Evans, *Palace of Minos*, p. 635. The Dactyls were alternatives for the Curetes as nurses of Zeus. (Paus. V, 7, 6). Apollonius Rhodius (I, 1125) names Titias and Cyllenius as παρῆδροι of the Idaean Mother, and identifies them with the Cretan Dactyls. For the Titans, sons of Uranus and Ge, as worshippers of Dionysus, see Cook, *Zeus* I, 655, and on their (probably late) association with the Cabiri see Pettazzoni, *op. cit.* pp. 687 f. In a Pergamene oracle, they appear as attendants at the birth of Zeus. (Kaibel, *Ephr. Gr.* 1035; Kern, *Beiträge, zur Ges. der gr. Phil. u. Relig.* p. 108.)

⁴ Petersen, *Arch.-Ep. Mith. aus Oesterreich*, 1881, pp. 26 ff.

support my theory of the origin of this triad in a confusion of a "Dioscuric" with a "Cabiric" or "Corybantic" trinity. A like amalgamation may meet us in Mithraic cult when the twin torch-bearers, Cautes and Cautopates, become epithets of Mithras *Τριπλάσιος*.¹

The Cabiri as mere *πρόπολοι* perhaps occur on the relief from Hierapolis in Phrygia² representing four youths, with the characteristic attributes of neck-rings, loin-cloths, and double-axes, and in the similar group of five youths from Uzümlü near Magnessia, four of whom carry a hammer.³

No wonder that Pausanias halts among the Dioscouri, Curetes, and Cabiri in his attempt to explain the nature of the Anaktes Paides of Amphisia,⁴ or that he was puzzled by the four small bronzes, one of Athena and three resembling the Dioscouri which he saw on the headland at Brasiae.⁵ We fall back with relief upon the essential rightness of the good Strabo:⁶ "The reports about the Curetes seem to resemble . . . the story told about the Satyrs and Sileni and Bacchi and Tityres. For they who hand down to us the Cretan and Phrygian traditions say that the Curetes are demons or attendants of the gods, something like these. . . . Some declare that the Curetes are the same as the Corybants and Cabirs and Idaean Dactyls and Telchines; others that they are all related, but have little differences between their natures . . . being all given to Bacchic frenzy, . . . so that these holy rites are in a manner connected with those of the Samothracians and those on Lemnos and many others; because they say that the attendant deities are the same."

Beginning with the worship of the double-axe as a symbol of the Great Mother, I have endeavoured to trace the transitions by which it became the property of the Father, and signified his ability to fertilize the Earth through lightning.

I then proceeded to explain, by reference to the double-axe

¹ Cumont, *Textes et Monuments Figurés relatifs aux Mystères de Mithra*, I, p. 208.

² *Ant. Skulp. Berlin*, p. 386 f. No. 953.

³ Kern, *Strena Helbigiana*, pp. 158 f.

⁴ X, 38, 7.

⁵ III, 24, 5.

⁶ X, 3, 7, p. 466.

fetish, duplications like the double Athenas and the dyad of Demeter and Kore, those which differ in sex like Apollo and Artemis, and lastly those representing two male divinities.

The members of the "family trinity" of Father, Mother, and Child may likewise be associated with the double-axe, and from this basic trinity numerous combinations may be developed, some of them even involving a quadruple cult.

Applying these suggestions to the cult of the Cabiri and those of the Curetes and Corybants, I tried to trace in all these mysteries the presence of the deities of the double-axe.

The importance of the sacred symbol itself, much as I have emphasized it, fades into insignificance beside the belief for which it stands,—a faith which may well be called fundamental, in the great Earth-Goddess,—Mother, Queen, and Ultimate Home of all mankind.

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GENERAL MEETING OF THE ARCHAEOLOGICAL INSTITUTE OF AMERICA

DECEMBER 27-29, 1922

THE Archaeological Institute of America held its twenty-fourth meeting for the reading and discussion of papers at Yale University December 27, 28, and 29, 1922, in conjunction with the American Philological Association, the American Historical Association, and the Society of Biblical Literature and Exegesis. Three sessions for the reading of papers were held, and there were four joint sessions: one with the American Philological Association, one with the American Historical Association, one with the Society of Biblical Literature and the Philological Association, and one with the Historical Association and the Philological Association. The abstracts of the papers which follow were furnished by the authors.

WEDNESDAY, DECEMBER 27. 2.00 P.M.

1. Professor Walter R. Agard, of Amherst College, *The Dating and the Aesthetic Interest of the Metopes of the Athenian Treasury at Delphi*.

This paper will be published in full in a later number of the JOURNAL.

2. Dr. Ida C. Thallon, of Vassar College, *The Tradition of Antenor and its Historical Possibilities*.

This paper will be published in full in a later number of the JOURNAL.

3. Professor Walter Woodburn Hyde, of the University of Pennsylvania, *A Terra-cotta Replica of the Philandridas Head (Loeb Collection)*.

This paper was published in full in the JOURNAL, XXVI, 1922, pp. 426 ff.

4. Professor B. L. Ullman, of the University of Iowa, *Archaeology and Moving Pictures*.

The paper aimed to show the importance of moving pictures for archaeological work. Motion pictures may be useful during actual excavation in order to prevent later disputes as to important points. They are also useful in presenting views of statues from different angles, and for displaying certain monuments, such as the interior of the Pantheon, which cannot be adequately shown in still pictures. They are also helpful in making clear the arrangement of a group of rooms or buildings, but their chief importance is in giving a faithful reproduction of the life of the past. We ought to have moving pictures showing restored views of the Roman Forum, the Acropolis at Athens, and hundreds of other places with the ancient inhabitants, so to speak, going about their daily business. Some material of this sort is to be found in various plays produced in moving pictures. The paper was illustrated with scenes taken from some of these films, such as Julius Caesar, Spartacus, and other films distributed by Mr. George Kleine. Archaeologists have a great opportunity to take the lead in the production of historically correct and worthwhile scenes from older civilizations.

5. Dr. Stephen B. Luce, of Boston, *Heracles and Achelous on a Cylix in Boston*.

This paper will be published in full in a later number of the JOURNAL.

6. Mr. J. Donald Young, of Columbia University, *A Sarcophagus from Corinth*.

This paper was published in full in the JOURNAL, XXVI, 1922, pp. 430 ff.

7. Professor A. M. Friend, of Princeton University, *Pre-Carolingian Ivories in America* (read by Professor C. R. Morey).

The group of Carolingian ivories which Adolph Goldschmidt has collected under the name "Ada" is heterogeneous and composed of several groups. One of these, consisting of the plaque in the Bodleian Library (Goldschmidt, No. 5), the panel of the Crucifixion in Berlin (Goldschmidt, No. 8), the Holy Women at the Tomb in Florence (Goldschmidt, No. 9), and the Virgin of the Annunciation in the Morgan Collection of the Metropolitan Museum (Goldschmidt, No. 12, from the Spitzer Collection) because of close stylistic resemblances to the Ashburnham Pentateuch, now admittedly Spanish, and striking iconographic connections with the ivories of Provence is given a provenance in ancient Septimania, perhaps even in Narbonne and is to be dated before the Arabic conquest of 719 A.D. The resemblances between the Morgan Virgin and the figure of Eve suckling Abel in the Pentateuch are most noticeable. The draperies of the figure of Christ in the Bodleian ivory and those of St. John in the one at Berlin bear the same close relation to the long robed figures in the Pentateuch. Three of the scenes on the Bodleian plaque are copied from a

Provençal ivory in Berlin, while the sleeping soldiers leaning against the tomb in the Florentine ivory seem copies of the same figures on the buckle of St. Caesarius of Arles. Two ivories which are associated with the group under discussion but which seem to be transitional pieces between this group and those assigned to Provence by Professor Baldwin Smith are the diptych in Milan Cathedral and the diptych in the cathedral at Palermo. Adding these two ivories to those enumerated above there are six which may be considered as constituting this Septimanian school. The connection of this school with the "Ada" group of Carolingian art is easier to explain if the Septimanian origin of Theodulphus, the bishop of Orleans, is accepted.

The other ivory discussed in this paper is the so-called Cranenburg diptych in the Morgan wing of the Metropolitan Museum. It consists of two curved panels representing St. Peter and St. Paul, both beardless and advancing towards one another. St. Peter, to the left, holds the keys—St. Paul carries a codex. These are excellent examples of the broken-down pictorial Roman art which we may call the Latin style. The eye in full view in the profile face is a peculiarity of this. The type of the face in the diptych and the style of the draperies, as well as the peculiar manner of attaching the legs to the body which makes the figures extremely broad across the hips, is to be found also in the inserted leaves of the Codex Purpureus in Munich. These leaves, because of their close iconographic connection with the ivories of Provence, are surely Gallic in origin. The same type of capitals of the columns sculptured on the diptych are to be seen in the Milan book covers which belong to the Provençal school. The type of the faces persists in the manuscripts of the Carolingian school of Tours. So does the iconographic peculiarity of the beardless St. Paul. Therefore the diptych can be considered, quite tentatively, as a work of the region of Tours at the end of the sixth or beginning of the seventh century. The Gallic origin is confirmed by the iconography. The panels were not originally a diptych. St. Peter and St. Paul approached a figure of Christ sculptured on a third panel now lost. The Christ was probably beardless, seated on a globe, as in the fresco in the Catacomb of Commodilla, the Milan book cover and the Manuscript of St. Ambrose in St. Paul of Kärnten. The three panels could only have been the front of an episcopal throne or cathedral. The scene is a *traditio clavium* with St. Paul. In the Latin Church where, only, such a scene would be used, the pericope for the day of St. Peter's Chair is the Gospel account of the delivery of the keys to St. Peter. The commemoration is, of course, for St. Paul. In the Missale Gothicum St. Peter is referred to as the pastor of the sheep and as having the keys. St. Paul is considered as the teacher. "*Petrus in clave—Paulus in dogmate: Pastor—Doctor.*" This explains the presence of the lambs above the apostles' heads in the ivories. The Feast of St. Peter's Chair, although it originated in Rome, seems to have dropped out of commemoration there from the sixth to the tenth century but flourished during that time, the period of the ivories, in Gaul. The subject on the Cranenburg panels, singularly appropriate for the decoration of a cathedral, could very well have been inspired by the liturgy in Gaul for the Feast of St. Peter's Chair.

8. Professor H. R. Fairclough, of the Leland Stanford, Jr. University, *The Antiquities of Montenegro.*

The Montenegro of today once formed part of the district of *Prævalitana*, comprised in the Roman province of *Illyricum*, which was first created in the time of Augustus in 9 A.D. The Romans built at least two roads through the country, one running eastwards from Rhizon (now Risano) on the Bouches de Cattaro, and a second running northwards from Scodra (now Scutari in Albania), once the capital of the Illyrian king Gentius. Several substantial piers of a Roman bridge are still standing where the latter road crossed the river Morača, two miles northeast of the modern town of Podgarica. The two roads apparently met at Niksic, whose Roman appearance has been noted by Sir Arthur Evans.

The chief Roman remains are to be found at Dukle, the site of the ancient Doclea, which lies at the junction of the Zeta and Morača rivers. This town is not mentioned in the *Tabula Peutingeriana* or in the *Itineraria Antonini*, and is seldom referred to in our literary records, though the *Docleatae* are mentioned by Pliny, Appian and Ptolemy. The last named writer is the first to speak of a city Doclea, one of the *πόλεις μεσόγειοι* of Dalmatia, which he gives in a list that includes Narona and Scodra. An inscription *in situ* has the words *respublica Docleatium*. The remains, which are still considerable, include a large portion of the city wall, the forum, a basilica, two temples, thermae, and a portico. Handsome capitals, made from the native Spuz stone, and fragments of columns and well-carved cornices still testify to the beauty of the ancient architecture. Some of these are now lying in the grounds of the American Red Cross hospital (formerly the palace of Prince Mirko) at Kruševac, opposite Podgarica, where a number of interesting inscriptions may also be seen.

The writer has nearly thirty interesting intaglios which were picked up on the site of Doclea and a large collection of coins, representing Hadrian, Gordian III, Philip, Valerian, Gallienus, Salanina (wife of Gallienus), Claudius, Aurelianus, Probus, Diocletian, Maximian, Licinius, Constantine I, Crispus, Constantius II, Constans, Valentinian, Gratian, and early Byzantine emperors. It is interesting to find that many of these coins were minted in Alexandria. Other Roman coins, picked up elsewhere in Montenegro, include a silver denarius of Caesar Augustus, struck in Spain, a bronze tetradrachm of Nero (θεὸς σεβαστός) and silver denarii of M. Aurelius and of Soemias, mother of Elagabalus. For the identification of many of these coins the writer is indebted to Mr. E. T. Newell, President of the American Numismatic Society.

The paper was illustrated with numerous photographs, which included one reproducing a sketch made from life by Miss A. M. Upjohn of a blind old *guslar*, whose musical recitation of the exploits of olden heroes, *κλέα ἀνδρῶν*, vividly recalled the art of the *ραψωδοί* of ancient Greece.

9. Professor J. P. Harland, of the University of North Carolina, *The Bronze Age of Hellas.*

According to the present system of chronology for the Bronze Age culture of the Helladic Mainland, the date 1600 B.C. has been taken as the dividing-point between Middle and Late Helladic. But this dividing-point should, I think, be moved down to 1400 B.C., at which approximate date there is evidence for a distinct "break" in the cultural and ethnic sequence of the respective peoples

of Southern Hellas. There is no "break" at ca. 1600 B.C. The period that follows this date (1600-1500 B.C.) is but a continuation of the previous period. The Minoan influence, seen especially in the decoration in lustrous paint of the pottery of this period, had already appeared in the previous period. It had begun to filter in gradually in the latter part of M.H. II, and had merely increased and become almost dominant in this period. But the transition was gradual. The Sixth Shaft Grave at Mycenae overlaps this transition, as it received its first interment in the latter part of M.H. II, and its second interment in the following period. It is to be noted that the Shaft Graves represent an unbroken series from the second half of M.H. II down through the following period. Hence, since there is no real "break" at 1600 B.C., I shall call this period—1600-1500 B.C.—Middle Helladic III. And likewise, since the period that follows this—1500-1400 B.C.—is, in turn, merely a continuation of (my) Middle Helladic III, I shall call it Middle Helladic IV. A really distinct "break" comes at ca. 1400 B.C., and this date should be taken as the end of the Middle Helladic period, especially because it is of such a character as to indicate the establishment of a new régime in Southern Hellas. The evidence for the invasion of a new people at this date (I have called it the "Achaean" Invasion) is briefly as follows: (1) Change of level of habitation; (2) changes in pottery (deterioration, differences in technique, cessation of several shapes, appearance of three new shapes—high-stemmed cylices, L.H. crater and *Bügelkanne*); (3) introduction of the fibula; (4) the typical Mycenaean figurine—terra-cotta image of a female deity with or without a child at her breast; (5) new palaces at many sites; (6) the "Bee-hive" or Tholos tomb becomes popularized; the majority and the greater ones are from the period following 1400 B.C., my Late Helladic Period; (7) the "Cyclopean" circuit walls. So I propose the following (emended) Table of Chronology:

Early Helladic Period.....	ca. 2500 to 2000 B.C.
Middle Helladic Period.....	ca. 2000 to 1400 B.C.
Middle Helladic I.....	2000-1800 B.C.
Middle Helladic II.....	1800-1600 B.C.
Middle Helladic III.....	1600-1500 B.C.
Middle Helladic IV.....	1500-1400 B.C.
Late Helladic Period.....	ca. 1400 to 1100 B.C.

Here we have the major periods corresponding exactly with the cultural and ethnic periods in the history of the successive peoples and civilizations of the Helladic Mainland.

10. Dr. Mary H. Swindler, of Bryn Mawr Collegè, *Venus Pompeiana and the New Pompeian Frescoes*.

This paper will be published in full in a later number of the JOURNAL.

11. Professor Mitchell Carroll, of Washington, *An Exhibition of Jewelry from the Bacharitz Collection*.

No abstract of this paper was received.

THURSDAY, DECEMBER 28. 9.30 A.M.

(Joint meeting of the Archaeological Institute and the Historical Association.)

1. Dr. Sylvanus Griswold Morley, of the Carnegie Institution in Washington, *History and Chronology in Ancient Middle America*.

This paper will be published in full in a later number of the JOURNAL.

2. Professor Ralph Van Deman Magoffin, of the Johns Hopkins University, *The Three Flavian Caesars*.

No abstract of this paper was received.

3. Dr. William H. Buckler, of Baltimore, *Historical and Archaeological Opportunities in the Near East*.

My object in examining the present Near Eastern situation from the standpoint of History and Archaeology is to emphasize the opportunities now presented there, particularly in Anatolia, probably the richest country in the world. The best basis for a quantitative estimate of sites for research there seems to be the list of cities and towns in Anatolia which coined money between the fifth century B.C. and the second century A.D. The term Anatolia, as here used, covers all of Asia Minor lying west of a line running north from Alexandretta through Sivas to the Black Sea. A list of such ancient cities and towns having mints of their own works out as follows:

In Lycia, Pamphylia, and Pisidia	95 towns
In Lycaonia, Isauria, and Cilicia	82 towns
In Phrygia and Galatia	61 towns
In Bithynia, Paphlagonia, and Pontus	34 towns
In Ionia, Lydia, and Caria	84 towns
Total	356 towns

When deductions have been made, as well as a liberal allowance for towns of which we know the names but not the exact positions, there will still remain about 300 "virgin" sites of towns deserving excavation. Since the known Phrygian or Hittite spots are not among the town-sites listed above, our total of places deserving investigation should be not 356, but nearly 400. How can we best assist in protecting and in using the contents of this enormous historical reservoir? The most pressing task is the making of a thorough inventory and survey—an archaeological "Domesday Book"—of Anatolia, as recommended about fifteen years ago by Sterrett. Of all the elements in such a work the most important would be conservation. By photographs, plans, casts, and other means it would record the ancient remains as they stand, say in 1925; and many priceless things, threatened with destruction within the next few years, would thus be rescued for science.

THURSDAY, DECEMBER 28. 2.00 P.M.

1. Dr. Walter W. S. Cook, of Princeton University, *The New Romanesque Fresco from Catalonia in the Boston Museum of Fine Arts.*

In a recent article on the new Romanesque fresco from Santa Maria de Mur, now in the Boston Museum, published in the *Burlington Magazine*, July, 1922, José Pijoan stated that this work was of the "eleventh or twelfth century," and in other publications, such as the last fasciculus of "*Pintures murals catalanes*," and in the article by J. Goday in *Museum*, the problem of the date has been entirely evaded or ignored. The church was founded in 1069 and consecrated in the same year. The fresco, however, is obviously not of the eleventh century and it offers striking proof of the fallacy of attempting to use the date of the consecration or foundation of a mediaeval church to establish the date of Romanesque frescoes. Palaeography offers a surer basis, although within broad limits, as the artist occasionally copied inscriptions from earlier monuments. The majuscule letters of the inscriptions in this fresco are of the first half of the twelfth century, which furnishes us with a *terminus a quo*. Iconography is the soundest basis for dating and in this case the only sure evidence. A straw which shows the general direction of the wind is afforded by the scenes from Genesis in the splayed window jambs. If we trace the Cain and Abel scene down through the monuments of Western Europe, and especially in Catalonia, to the eleventh century page of the Bible of Farfa, Abel bears the lamb on his shoulders like the Hermes Criophoros and the two figures are asymmetrical. In the twelfth century the type changes. Abel holds the lamb with both hands in front of the body and Cain appears on the opposite side with outstretched arms holding a sheaf of wheat. An essential characteristic of the twelfth century is the symmetrical arrangement of the two figures as seen in the twelfth century frescoes of St. Savin, the Burgundian capital from Moutier St. Jean, dated about 1135, in the Fogg Museum, and the relief on the podium of the façade of the church of St. Gilles.

The date of our fresco can be determined by the iconography of the tympanum composition, the subject of which is the "Apocalyptic Vision," and not the "Ascension," as stated by Sr. Pijoan. In the Carolingian type of Christ in Majesty, the four symbols of the Evangelists are small inserts at the four corners, as in the ninth century Evangeliary of Lothaire and the first Bible of Charles the Bald. This is the type found in the Gerona Beatus, the Vigilano, and Emilianense Manuscripts and continues during the first half of the twelfth century, as on the choir screen reliefs of St. Sernin, Toulouse, and in the tympanum at Carennac. The type, however, changes in the mid-twelfth century, as on the tympanum of the central portal of the west façade of the cathedral of Chartres, which is identical with the tympanum composition in the Boston fresco. The symbols are large in scale, characteristic of the naturalism inaugurated by proto-Gothic Ile-de-France sculpture about 1145-1150, as contrasted with the old Romanesque symbolical proportions of the first half of the century, an inheritance from the Carolingian period. There is the same horizontal dividing line of clouds which forms four lateral compartments containing the Signs of the Evangelists, and even the thin fringe of clouds around the inside of the composition. Our artist, in fact, has copied the Chartres composition,

almost line for line. He has even taken over the twelve apostles on the lintel which are here placed on the semi-circular wall below. This type spread from the Île-de-France throughout Southern France and to the farthest corners of the Iberian peninsula, as shown in the frieze at Carrión de los Condes (Palencia), the church at Morabes, and is found as late as 1266 on the tombstone of Raimundus de Milano in the Cathedral at Tarragona.

The fresco from Santa Maria de Mur is further proof of the dominating influence of the creative centre of Île-de-France and on the basis of iconography we have a sound *terminus a quo*. Pijoan's suggestion that it might have been painted in the eleventh century is quite untenable and it could not have been executed in the first half of the twelfth century. It is certainly much earlier than the epitaph of Tarragona, dated 1263, and in comparison with other Catalan monuments of the period the fresco in the Boston Museum can be placed in the second half of the twelfth century. Moreover, the same date can be given to the fresco of Ginestare de Cardós, now in the Barcelona Museum, which hitherto no one has attempted to date with any degree of assurance or definite proof. In fact, the Boston fresco seems destined to be an important factor in establishing the chronology of mediaeval painting in Catalonia. An article will be published this spring in *Art in America* dealing with other aspects of the work.

2. Professor Ernest T. Dewald, of Rutgers College, *A Manuscript of the School of Cologne in the Morgan Library*.

No abstract of this paper was received.

3. Mrs. Phila C. Nye, of Princeton University, *The Origin of the Type of the Romanesque Signs of the Zodiac*.

The territory in which the signs of the Zodiac are popular in the Romanesque period coincides with the territory occupied by the Romans, whose soldiers carried with them the Mithra worship which persisted until the fifth century in some parts of Europe, and was popular among the people in all those portions of Europe. Also the use of the signs as a continuous band motive seems directly derived from the Mithraic reliefs rather than from any other known source heretofore considered.

4. Mr. Roger Sherman Loomis, of New York, *The Bayeux Tapestry*.

The three latest books on the Bayeux "Tapestry" are burlesques on archaeological research. Even the learned journals and standard works of reference contain serious errors regarding the date and provenance of the embroidery. But it is certain that the work was carried out by Anglo-Saxons and was completed probably within ten years, certainly within twenty years of the Conquest. Contemporary testimony establishes the fact that the Norman conquerors set a high value upon Anglo-Saxon needlework, and took much of it back to decorate the churches at home. Only an Anglo-Saxon could have used the peculiar word forms in the inscriptions of the Bayeux embroidery. As for the date, both the resemblance of the costume to that shown in a manuscript

completed before 1072, and the fall of Bishop Odo, the hero of the embroidery, a few years later, point to the years immediately following the victory at Hastings.

5. Professor A. Kingsley Porter, of Harvard University, *Bari, Modena, and St. Gilles.*

The episcopal throne of S. Niccola of Bari is surely dated 1098 by an inscription and by a contemporary chronicle. Being of certain date, it offers an interesting opportunity to test by comparison the accuracy of the chronological theories current in mediaeval archaeology. Thus the throne is evidently closely related to the tomb of S. Alberto at Pontida, a monument which the documents indicate dates from 1095, but which modern archaeology has found so advanced in style that it has set aside the documentary evidence and assigned the tomb to the middle of the twelfth century. Since the style is the same as that of the throne of Bari, there can be no doubt that the Pontida tomb really dates from 1095. By a similar process of comparison it becomes evident that the Porta della Pescheria of the cathedral of Modena dates from 1099-1106, precisely as the documents indicate, and not from the end of the twelfth century as archaeologists have supposed; that the façade sculptures of the cathedral of Modena are really of 1099-1106; that those of the cathedral of Cremona date from 1107-1117. This last dating is, moreover, confirmed by comparison with the Puerta de las Platerias at Santiago de Compostella, which dates from 1102-1124. The most amazing analogy of all, however, is that presented by the Bari throne and the archivolt of Monopoli with the frieze of St. Gilles. The parallels are indeed so close as to force the conclusion that archaeology in dating the St. Gilles frieze to 1180 has fallen into an error of some forty years.

6. Dr. Gisela M. A. Richter, of the Metropolitan Museum of Art, New York, *Recent News from Athens.*

Miss Richter gave a concise account of last season's excavations in Greece—at Zygouries, Corinth, Mycenae, Thebes, Olympia, etc.—and showed slides of the sculptured bases recently found in Athens.

7. Count Byron Khun de Prorok, *Recent Excavations at Carthage.*

No abstract of this paper was received.

THURSDAY, DECEMBER 28. 8.00 P.M.

(Joint meeting with the Society of Biblical Literature and the Philological Association.)

1. Professor William Bell Dinsmoor, of Columbia University, *How the Parthenon was Planned.*

No abstract of this paper was received.

2. Professor William J. Hinke, of the Auburn Theological Seminary, *Recent Excavations in Palestine.*

In September 1920, the Palestine Exploration Fund, in conjunction with the British School of Archaeology in Palestine, began excavations at the ancient Philistine city of Ashkelon. During the first campaign some of the more prominent ruins were examined. In the southern part of the mound the ruins of a Byzantine church were laid bare with the remains of a Crusades' church not far away. On the eastern side of the city, between the high mound and the outer wall, a large public building from Roman times was brought to light, constructed with Greek and Roman marble in excellent style. That it dates from the first century of our era is clear from several Greek inscriptions, one of which was inscribed in honor of Aulus Instuleius Tenax, centurion of the famous Tenth Fretensian Legion, which took part in the siege of Jerusalem. Professor Garstang is inclined to regard the original building, which has an apse at its southern end, as the Bouleuterion, to which Herod the Great added magnificent colonnades and cloisters as a sort of a forecourt and main entrance. A second campaign was carried on at Ashkelon from April to July 1921, which continued the excavation of the Herodian building and determined the stratification of the mound by cross sections. The chief gain of this excavation has been to define the character and limits of the Philistine culture, especially in its ceramics, from 1200 to 600 B.C.

At the ancient city of Bethshan, now Beisan, about sixteen miles southwest of the Lake of Galilee, excavations have been carried on by the Museum of the University of Pennsylvania, under the direction of Dr. Clarence S. Fisher. The first campaign from June to October 1921, aimed to determine the stratification of the ancient citadel, now called Tell el-Hosar. A wide shaft, sunk on the eastern side of the hill to a depth of twelve metres, determined the various levels down to the Hyksos period, about 2000 B.C. After determining the various layers of the mound, the excavators began the more difficult task of systematically dissecting the mound. Two separate areas were laid out for examination, one including a large portion of the lower northern and eastern terraces, the other embracing the entire summit. On the lower terrace an Arabic wall and gateway, built of earlier materials, and, some distance back of them, an Arabic village was found. In the walls of one of the houses a large marble block had been inserted with a Greek inscription, referring to the rebuilding of the town walls in 509-510 A.D. The most notable find on the summit of the hill was an Egyptian stela, of the reign of Sethos I, 1313-1292 B.C. The work during last summer was largely devoted to an examination of a necropolis north of the hill, which brought to light a series of clay coffins, with rude representations of human faces. They seem to belong to the twelfth century B.C.

The American School of Oriental Research excavated during the spring and summer of 1922 at Tell el-Ful, most likely the ancient Gibeah of Saul. On the summit of the hill were found a series of four watch towers, superimposed upon each other. The uppermost migdol or tower was found to belong to the early Maccabean period, the next below to the later regal period. The director of the School, Dr. Albright, wishes to ascribe it to Asa, whose activity at Gibeah is recorded in *I Kings* xv, 22. The third tower, most elaborate and skilfully constructed, with ten characteristic niches in its wall and a massive staircase,

seems to belong to the period of Saul. The lowest stronghold, with late Canaanite ware and bronze weapons, was destroyed by fire, as a thick layer of ashes, in places ten centimetres deep, indicates. Although the excavations at Gibeah were not rich in inscriptions and museum objects, they were valuable for the archaeological and historical data brought to light.

3. Professor E. K. Rand, of Harvard University, *An Evangelary of Tours in the Pierpont Morgan Library*.

No abstract of this paper was received.

4. Dr. T. Leslie Shear, of Columbia University, *The 1922 Results at Sardis*.

This paper was published in full in the JOURNAL, XXVI, 1922, pp. 389 ff.

FRIDAY, DECEMBER 29. 9.00 A.M.

1. Dr. W. R. Bryan, of Columbia University, *The Earliest Latin Civilization in the Light of Archaeological Evidence*.

This paper will be published in full in the *Memoirs of the American Academy in Rome*.

2. Dr. Hetty Goldman, of New York, *Excavations of the Fogg Museum at Colophon*.

Excavations at Colophon were carried on for the first time during a period of ten weeks in the early summer of 1922, by the Fogg Art Museum of Harvard University in coöperation with the American School of Classical Studies at Athens. The work was confined to uncovering a limited area of the largest terrace of the upper city; partial excavation of a smaller adjacent terrace, the precinct of the "Mother" or Cybele as we learned from inscriptions; trial trenches at many points of the upper and lower city; and the opening of a few graves in each of three different cemeteries.

Our investigations showed that the main part of the upper city or acropolis, was thickly covered with private houses built along well-paved streets, interspersed with public buildings mostly of a secular nature (such as stoas, bath-houses, etc.). The private houses, dated by coins and objects found in them as belonging in most cases to the fourth century, show a fairly uniform plan. A complex of three or more rooms opened towards the south on an irregularly shaped court, containing altar and well, while an isolated room, usually more elaborately decorated than the others and with an upper story, formed a tower-like structure opening independently on the court. A pit dug through the floor of one of the houses revealed the walls of an earlier house more than four metres below the fourth century level and quantities of interesting geometric pottery.

No regular temple has yet been found in the precinct of Cybele. We uncovered, however, a long colonnade; a flight of broad steps converging from three sides towards a platform with mosaic pavement and a basis placed in a

niche of the terrace wall, which may originally have supported a group of statues; and at least one other large building. Many inscriptions were found in this precinct, the most important for the history and topography of Colophon relating to the extension of the city walls and replanning of the city, after "King Alexander and Antigonos" had freed Colophon.

Investigation of the cemeteries revealed a tholos tomb, robbed, but with fragments of Mycenaean pottery; burned burials with a quantity of geometric pottery; and unburned internments of the fourth century.

3. Professor Walton B. McDaniel, of the University of Pennsylvania, *The Holiness of the Dischi Sacri*.

This paper will be published in full in a later number of the JOURNAL.

4. Professor Margaret C. Waites, of Mount Holyoke College, *The Deities of the Sacred Axe*.

This paper is published above, pp. 25 ff.

5. Professor Elizabeth H. Haight, of Vassar College, *The Vassar College Tapestries*.

This paper will be published in full in *Art and Archaeology*.

6. Professor R. A. MacLean, of Rochester University, *The Aeroplane and Archaeology*.

Among the many services which the aeroplane is rendering at the present time not the least is the aid which it is giving in archaeological discovery. In countries such as Mesopotamia where there are few maps to guide the archaeologist, and in portions of Arabia which are difficult of access by ordinary means of travel, the aeroplane has already proved to be a valuable subsidiary help in making preliminary surveys, and in locating historical ruins and the possible sites of ancient cities. Two illustrations will suffice. This last summer I went by aeroplane from Amman in Transjordan to visit some Roman ruins at "Kasr Azraq" in the Syrian desert. Owing to the volcanic nature of the western portion of the Syrian desert this place had probably never been visited before by any archaeologist in modern times. The ruins consist of an old Roman fortress of the days of Trajan. Another noteworthy feature was the presence on the oasis of about twenty pools of clear cold water surrounded by a Roman wall. It was interesting to observe that while this wall, only portions of which remain, could hardly be distinguished by an observer on the ground, its alignment and complete circuit of the pools could be seen clearly from the air.

My second illustration is from Mesopotamia. Among the many lost cities of ancient times may be mentioned two which Xenophon speaks of in the *Anabasis*: the πόλις μεγάλη καὶ πολυάνθρωπος, ἡ ὄνομα Σιττάκη, and the πόλις μεγάλη, ἡ ὄνομα Ὠπίς. Until quite recently the difficulty in determining the site of these two cities was due to the fact that the course of the Tigris in ancient times was

not known to us. But by recent observations and photographs taken from the air it is now pretty well established that that portion of the Tigris which lies to the east of Xenophon's Median Wall had its bed about fifteen miles to the west of the present bed of the river. The depression seen from the air and the line of mounds along the depression were the clues which led to what is thought to be the discovery of the sites of both Opis and Sittace.

7. Mr. Harald Ingholt, of Princeton University, *Palmyrene Reliefs: Chronology and Style.*

Starting out from the dated examples of the Palmyrene portrait-reliefs, an attempt was made to establish a chronology for the male and female busts. The dated male busts hitherto known seem to justify the following observations: In the first period, extending to about the middle of the second century, the men appear unbearded. Then the fashion changes and the beard is introduced, which, in the latter part of the second and in the third century, apparently undergoes changes similar to the Roman. A class by itself is formed by the beardless figures with a modius-like headdress. The women, in the first half of the second century, are represented with the hair coming down over the shoulders, the over-garment being kept in place by an almost trapezoidal fibula. Most of them hold the spindle and the distaff in their hand, but very little jewelry appears. In the next period, which approximately occupies the second half of the second century, the hanging locks still occur, but more jewelry is used, and the fibula has no longer the archaic shape. This transitional period is followed by a third, in which the locks are done up, and the fibula most frequently is round. As to the style, the most noticeable features are the treatment of the eye and the non-plastic composition of the head. As a whole, the Palmyrene busts afford an unusually early example of the flat and decorative transformation of Hellenistic form, similar, in character, to that which is found in the Asiatic sarcophagi.

8. Professor C. R. Morey, of Princeton University, *The Chronology of the Asiatic Sarcophagi.*

The Asiatic sarcophagi divide into two classes, the first produced in Lydia and presumably at Ephesus, the second and later class probably manufactured in northern Asia Minor, and represented by the sarcophagus from Sidamara. The chronology of the first or Lydian group rests upon the dates of the Melfi sarcophagus (ca. 170 A.D.), the sarcophagus discovered at Sardis (ca. 190), and the Torlonia sarcophagus (first quarter of third century). By noting the changes in the system and details of decoration occurring through this sequence, the twenty-odd sarcophagi of the Lydian group may be dated, by comparison with the above-mentioned three, as follows:

- ca. 160: the Borghese sarcophagus.
- ca. 165: the sarcophagus from Torre Nova, and a lid from the same site.
- ca. 170: the sarcophagus of Melfi; a fragment with Heracles-scenes in the Giardino della Pigna; others at Myra (Lycia), and in the Chiaramonti Gallery; a sarcophagus front (Labours of Heracles) in the British Museum.

ca. 175-185: Two fragments from Denizli (Phrygia) in the Louvre; a fragment from Sardis in the same museum.

ca. 200: the sarcophagus in the Colonna Gardens; a fragment at Isnik.

ca. 200-225: the Torlonia sarcophagus.

The Sidamara sarcophagi are distinguished from the Lydian group by their strong coloristic treatment of both figures and ornament, and the earlier ones may be detected by some reminiscence of the Greek ornament maintained throughout the Lydian group. The sarcophagus in the court of the Riccardi Palace at Florence, long dated in the second century and regarded as a capital member of the Asiatic series, proves to be a western imitation of the first quarter of the third century. What criteria we have for dating the Sidamara group supports Mendel's dating of the Sidamara sarcophagus itself in the second quarter of the third century. The chief evidence for date in this group is furnished by the gradual obliteration of form in favor of a flat illusionistic treatment. The new fragment in Berlin, dated by Wulff in the *Ämtliche Berichte* of 1914 in the fourth century, is proved by comparison with the Mattei sarcophagus in Rome, on which identical figures of Muses appear, to be of the second half of the third century. The following chronology may be set up for the group:

First quarter of third century: the Richmond fragments; two fragmentary sarcophagi in the Museum at Athens; fragments from Altıntash and Kutaya now in the Brussa Museum; the Borghese fragments in the Louvre.

Second quarter of third century: the Sidamara sarcophagus, and that from Selefkeh, both in the Ottoman Museum.

Middle of third century: the fragment in the Metropolitan Museum; the Ghetto fragment in the British Museum; fragments at Bari and Smyrna.

Second half of third century: the Mattei sarcophagus; its sister-fragments in the British Museum and Berlin; a sarcophagus and a lid at Hierapolis Phrygiae; fragments at Konieh, Alashehr, and Eskishehr; a lid at Sagalassus; a fragment from Denizli in the Louvre.

End of the third century: the Concordia fragment and another in the Ludovisi collection.

First quarter of fourth century: sarcophagus-front from Ste-Marie-du-Zit in Africa, now in the Museum of Alaoui.

End of fourth century: Christian fragment from Constantinople in Berlin.

9. Professor Clarence Kennedy, of Smith College, *New Photographs of Greek Sculptures in Munich*.

No abstract of this paper was received.

10. Professor Allan Marquand, of Princeton University, *A Madonna by Antonello Rossellino* (read by title).

Formerly at Donaldson's, London, then in the collection of Mr. Charles T. Barney, New York, this Madonna is now in the galleries of P. W. French and Co., New York. It is slightly repaired. In style it is very characteristic of Antonio Rossellino, closer in type to the Madonna of the Portogallo Tomb (1466) than to the S. Croce Madonna (ca. 1475). It exhibits still the influence of Donatello.

11. Dr. W. F. Stohlman, of Princeton University, *A Manuscript of the School of St. Gall* (read by title).

12. Professor E. Baldwin Smith, of Princeton University, *The Two-storied Tomb in Christian Iconography* (read by title).

13. Professor George M. Whicher, of Hunter College, *Vitruvius' Discussion of Building Materials* (read by title).

FRIDAY, DECEMBER 29. 2.00 P.M.

(Joint session of the Archaeological Institute, the Historical Association, and the Philological Association.)

No archaeological papers were read.

ARCHAEOLOGICAL NEWS¹

NOTES ON RECENT EXCAVATIONS AND DISCOVERIES; OTHER NEWS

SIDNEY N. DEANE, *Editor*

Smith College, Northampton, Mass.

GENERAL AND MISCELLANEOUS

AN INTERNATIONAL INSTITUTE OF ARCHAEOLOGY.—A group of archaeologists of different nationalities, American, Belgian, British, Dutch, French, German, and Italian, recently met at the British School of Archaeology in Rome to discuss the feasibility of an international institute of archaeology, which should collect and publish current archaeological news, and which might undertake the publication of large works requiring the coöperation of archaeologists of different nations. (*Ant. J.* II, 1922, p. 389.)

NECROLOGY.—**Howard Crosby Butler.**—On August 13th, 1922, Howard Crosby Butler, Professor of the History of Architecture and Director of the School of Architecture at Princeton University, died in Paris. He had been excavating at Sardis in Asia Minor, where he contracted a malarial fever which weakened his constitution and led eventually to his death.

Professor Butler was born at Croton Falls, New York, March 7th, 1872. He received the degrees of A.B. in 1892 and A.M. in 1893 from Princeton University, and studied at the School of Architecture of Columbia University and at the American Schools of Classical Studies at Rome and at Athens. In 1899 and again in 1904 and 1909 he organized and conducted expeditions to Syria which collected a vast amount of archaeological material, most of which has now been published in a series of monumental volumes. From 1910 to 1914 and again in the early summer of 1922 he was in charge of the American excavations at Sardis, which have already led to results of the greatest importance. He was chairman of the Research Commission of the Archaeological Institute and held other important positions both in the Institute and at Princeton University. In 1910 he was awarded the Drexel Gold Medal for archaeological exploration by the University of Pennsylvania. His death is deeply mourned by his friends and colleagues. On October 21st 1922, a

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor DEANE, Editor-in-charge, assisted by Professor SAMUEL E. BASSETT, Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Dr. T. A. BUENGER, Professor HAROLD N. FOWLER, Dr. STEPHEN B. LUCE, Professor ELMER T. MERRILL, Professor JOHN C. ROLFE, Dr. JOHN SHAPLEY, Professor A. L. WHEELER and the Editors, especially Professor BATES and Professor PATON.

No attempt is made to include in this number of the JOURNAL material published after December 31, 1922.

For an explanation of the abbreviations, see pp. 128-129.

memorial meeting in his honor was held at Princeton University. His more important archaeological contributions are as follows: *Scotland's Ruined Abbeys*, 1900; *The Story of Athens*, 1902; *Architecture*, Part II of the *Publications of an American Archaeological Expedition to Syria*, 1903; *Ancient Architecture in Syria*, Division II of *Publications of the Princeton Expedition to Syria*; and his 'Reports' upon the excavations at Sardis published in the *American Journal of Archaeology*.

Edouard Philippe Émile Cartailhac.—In *R. Arch.*, fifth series, XV, 1922, pp. 149-161 (portrait), is a very appreciative sketch of the life and works of the eminent scholar Edouard Philippe Émile Cartailhac (February 15, 1845-November 25, 1921) by S. REINACH. Cartailhac was devoted to prehistoric archaeology, especially that of France. His own writings are numerous and important, but even more important was the assistance which he gave most freely to others.

Augustin Cartault.—Born at Paris in 1847, Augustin Cartault died in January, 1922. He was an excellent scholar, though he had the misfortune to accept and proclaim as genuine the forged terra-cotta groups which appeared in great numbers shortly after 1880. (S. R., *R. Arch.* XV, 1922, p. 161.)

Enrique de Cerralbo.—The Marquis Enrique de Cerralbo, who was born in 1845 and died in 1922, was an active explorer of the prehistoric sites of Spain, and the author of numerous publications describing his discoveries. (*C. R. Acad. Insc.* 1922, pp. 318-319.)

Léon Dorez.—In *R. Arch.* XV, 1922, p. 163, is an obituary notice of Léon Dorez (1864-1922) from the *Débats*, January 28, 1922 (signed P.). Dorez was a connoisseur of manuscripts and illuminations, of early printing, and of the literature of the Renaissance. His works are numerous and important in his chosen fields.

Edmond Durighello.—Edmond Durighello, born at Saïda, died February 18, 1922, at Héliouan, Egypt. Nearly all European museums possess objects derived from his clandestine excavations of tombs on the Phœnician coast. He even published a few articles. The family of Durighello was Venetian, and Edmond's grandfather, Angelo, was consul general of France at Aleppo, where he represented also other European powers and the United States. He died at Aleppo in 1841. His son, Alphonse, was born at Aleppo in 1822, became French vice consul at Saïda in 1852, and died there in 1896. He carried on excavations at Saïda and discovered the sarcophagus of Eshmounazar. He also excavated at other places, and his son's excavations were, in part at least, carried on in accordance with his directions. (S. R., *R. Arch.* XV, 1922, pp. 333-335.)

Louis Gonse.—In December, 1921, Louis Gonse died at the age of 75 years. Though not a profound scholar, he was more than a mere popularizer. His works on Japanese art, on French architecture and sculpture, and on the provincial museums of France are beautiful, well illustrated books and contain original views and delicate artistic appreciations. He was editor of the *Gazette des Beaux-Arts* for many years (1875-1893). (S. R., *R. Arch.* XV, 1922, p. 162.)

William Gowland.—William Gowland, who was born in 1842 and died in 1922, was primarily a chemist and mineralogist, and for many years was Head of the Mint in Japan. After his return to England he became a Fellow of the

Society of Antiquaries, and often contributed to its *Proceedings* papers on Japanese archaeology and early metallurgy in Europe. In 1901 he undertook an important piece of restoration at Stonehenge, resulting in discoveries which he described in *Archaeologia* LVIII. (E. BRABROOK, *Ant. J.* II, 1922, pp. 390-391.)

Henri de La Martinière.—Henri de La Martinière, who died at Paris in March, 1922, at the age of 63 years, was charged with scientific missions in Morocco from 1887 to 1891, was subsequently director of the cabinet of the governor general of Algiers (M. Jules Cambon) and consul general at Tangier, then occupied consular and diplomatic posts in other countries. He was one of the pioneers of archaeology in Morocco. (*R. Arch.* XV, 1922, p. 332, from *Débats*, March 20, 1922.)

Georg Möller.—Georg Möller was born at Caracas in Venezuela in 1876, and died at Upsala on October 2, 1921. He became interested in Egypt early in life, and after prolonged studies in Berlin he was for some years archaeological assistant of the German Consulate General at Cairo. He took part in numerous excavations during this residence in Egypt and in later visits to the country. After 1907 he was associated with the Berlin museums and shortly afterward with the University as an authority on demotic writing and language. His death was due to illness contracted during war service in the Near East. Although especially active in demotic studies, his knowledge of the whole field of Egyptology was unusually comprehensive and thorough. (H. SCHÄFER, *Ber. Kunsts.* XLIII, 1922, pp. 1-4.)

Émile Rivière.—Émile Rivière, who died early in 1922, aged 87 years, was one of the first to conduct serious investigations in the field of prehistoric archaeology in France. In spite of ability and real merit he never attained general recognition. (S. R., *R. Arch.* XV, 1922, p. 333.)

EGYPT

THE EGYPTIAN EXPEDITION OF THE METROPOLITAN MUSEUM.

—The Metropolitan Museum of Art in New York has again published a special supplement to its Bulletin, entitled *The Egyptian Expedition, 1921-1922* (56 pp.; 71 figs.; part of *B. Metr. Mus.* December, 1922). An introductory note by A. M. LYTHGOE (pp. 3-4) is followed by a description of recent operations at Lisht, by A. C. MACE (pp. 4-18). Here Mastaba 954, in the northeast quarter of the pyramid precinct, was excavated, and three groups of six burial chambers, opening from a central shaft, were discovered. Those of the lowest tier had never been used. Some small objects were discovered in the others. Eleven additional burial-pits in the series west of the pyramid were cleared, and epigraphic confirmation of the assignment of these tombs to the princesses of the Middle Kingdom was obtained. A number of blocks of Old Kingdom relief were discovered, re-used in the Middle Kingdom construction. The excavation incidentally brought to light extensive remains of the mud brick village which grew up on the ruins of the pyramid, together with many small objects of the same period. H. E. WINLOCK reports the results of his excavations near Thebes (pp. 19-48). The site of the unfinished tomb-temple discovered the year before was cleared, and evidence was found to confirm the theory that it belonged to the last king of the eleventh dynasty, Sankhare Mentuhotep V. On the face of a cliff between this site and that of

the temple of Mentuhotep II are the scrawled signatures of many priests, all in the service of Mentuhotep II or Mentuhotep V. It is, therefore, most probable that the unfinished temple is to be attributed to the latter king. Some of the New Kingdom graves made in the platform of the temple were excavated. The court of the great temple of Mentuhotep II at Deir el Bahri was cleared, and showed evidences of a radical change of plan and orientation in its later period. A series of fourteen pits dug for the planting of an avenue of trees was found. In a change of plan all but four of these had been later filled again with debris. On one side of this avenue were rows of smaller pits for other trees; and two fragments of a floor slab of the temple were found with a plan of this plantation scratched on them. The foundation deposits of the temple were discovered. Outside of the southern courtyard walls were found forty rope baskets filled with stone chips, which had been abandoned in this position at some time in the eleventh dynasty period. Other discoveries of interest were made in tombs cut in the cliff which looks toward the approach to the temple. Here in connection with the great tomb of Ipy and a smaller tomb associated with it the excavators discovered a series of documents which had been abandoned, the accounts and letters of one Hekanakht, Ka-keeper of the tomb, who controlled lands both near Thebes and in northern Egypt. N. DE GARIES DAVIS describes his recent work in the study and copying of the paintings of the Theban necropolis (pp. 50-56).

EXCAVATIONS OF THE BRITISH SCHOOL OF ARCHAEOLOGY.—

Professor Flinders Petrie has recently conducted excavations for the British School of Archaeology in Egypt at Abydos and at Oxyrhynchus. At Abydos graves of the first dynasty and of later date were excavated. At Oxyrhynchus the great theatre and the colonnade were further examined. Many of the objects found have been exhibited at University College in London. They include ivory tablets of King Zer, fragments of ivory lions, seven stelae, four ebony cylinder seals and other objects of the first dynasty. Thirty inscribed stelae of the Middle Kingdom and of later date were shown; strings of carnelian beads of the XIIIth dynasty, and part of a beautifully decorated Book of the Dead, of the XVIIIth or XIXth dynasty. Objects of Christian date included Greek and Hebrew papyri, and architectural sculptures from Oxyrhynchus. (*Ant. J.* II, 1922, p. 388.)

TELL EL-AMARNA.—Recent Excavations.—The expedition of the Egypt Exploration Society, directed by Mr. C. Leonard Wooley, has excavated the house of the vizier Nekht at Tell el-Amarna. The walled village discovered in the previous campaign has been more fully investigated. At the south end of the plain was discovered a river temple. Reliefs of Akhenaton were found in it; but it was occupied as late as the XXVIth dynasty. Maru-Aten, the Precinct of the Disc, was also excavated at the south end of the plain. A lake in the centre was originally surrounded with trees, flower-beds, and a number of buildings, among which were the royal kennels, which contained bones of the king's greyhounds. (*Ant. J.* II, 1922, p. 388.)

THEBES.—The Tomb of Tut-ankh-Amen.—Although official reports of the discovery are not yet available, it is evident from the dispatches in the daily newspapers that the tomb of Tut-ankh-Amen, discovered in November, 1922 by Lord Carnarvon and Mr. Howard Carter in the Valley of the Kings, is the most important royal tomb excavated in recent years, and contains objects of

unique interest and value. Its situation is just below the tomb of Rameses VI. From the outer door found by Mr. Carter a flight of sixteen steps and a sloping passage led to a door in the east wall of a chamber twenty-five feet long, twelve feet wide, and about nine feet high. The longer axis of the chamber is north and south, at right angles to the passage. The north wall is a partition wall, and contained a blocked-up door, indicating that beyond it was the actual burial chamber. On either side of this door were found wooden statues of the king. The body and limbs of each of these were painted black, while the head-dress, skirt, and sandals were covered with gold leaf. In the west wall an irregular opening, made by ancient robbers, allows a glimpse of a confused mass of tomb-furniture in an inner chamber. The outer room itself had been robbed of objects of precious metals, probably not long after the death of the king. But the other furnishings were not much disturbed, and include an elaborately carved and ornamented royal chair or throne; three great state couches of gilded wood, three chariots, musical instruments, pottery and alabaster vases, boxes of clothing, boxes of preserved venison, mutton, duck, etc. Folded sheets, which were at first thought to be papyri, proved to be napkins. Among objects of special artistic interest is a wooden box covered with fine miniature paintings of hunting scenes: the pursuit of gazelles, wild asses, ostriches and hares is represented. A footstool is significantly inlaid with a row of figures of captives and prisoners. The largest chariot, which is semicircular in form and open at the back, is of wood covered with gold leaf with delicately embossed decorations and exquisite inlaid designs in carnelian, malachite, lapislazuli, blue glaze and alabaster. At each corner is a small inlaid circle enclosing the sacred eye of Horus. These eyes are inlaid in blue, black and white. The inner surface of the chariot is of plain gold with large embossed cartouches of the king and his queen under the royal vulture which has wide, up-spreading wings. The edges of the chariot and the hand-rail around the top are covered with red leather, but the bottom, which was also of leather, has fallen away. Between the rail and the body in front are small carved figures of Semitic captives. This is the largest Egyptian chariot known, and was doubtless used by the king and queen on state occasions. A yoke which went across the necks of the horses was found with it. Still more important than the chariots is a bust, perhaps representing the young queen, exquisitely carved in wood and covered with a thin coating of plaster. The figure has on its head a crown similar to that designed by Akhnaton for his queen. This is painted yellow to represent gold. It has the uraeus over the forehead. The face and neck are brownish yellow and the eyes and eyebrows black. The arms of the figure were intentionally cut off at the shoulders, but the body, which is draped in a white robe, extends as far as the waist. The features show the soft expression characteristic of the artists of Akhnaton, whose daughter the figure may represent. The nostrils are finely carved, the lips are clear cut and full, and the cheeks and chin round and youthful. The figure is an important work of art. On February 16 the burial chamber was opened and found to contain a gilded canopy almost filling the room. Within this was a second canopy enclosing the sarcophagus. Adjoining the burial chamber was another room full of chests, works of art, etc. The tomb lies so low that it is not free from damp, and some of the objects which have been found in it will need special care to prevent disintegration. In the work of clearing the tomb the

discoverers are being assisted by Dr. A. M. Lythgoe of the Metropolitan Museum and other Egyptologists. (A. E. P. WEIGALL, *Philadelphia Evening Bulletin*, Jan. 20-Feb. 16, 1923).

BABYLONIA AND ASSYRIA

PROGRESS IN BABYLONIAN AND ASSYRIAN DISCOVERY.—In *Exp. Times*, XXXIII, 1922, pp. 392-396, 439-443, C. J. GADD describes all the important archaeological expeditions that have worked in Babylonia, Assyria, Mesopotamia, and Asia Minor since 1890 that have yielded cuneiform inscriptions. He then discusses the results of these discoveries for history, religion, law and commerce, and language.

ASHSHUR.—*The Babylonian Account of Paradise and the Fall.*—One of the most surprising discoveries of the German Expedition at Ashshur was a tablet containing an account not only of creation, but also of the long-sought Babylonian Garden of Eden, the fall of man, his destruction and re-creation, and the redemption of the gods by the death and resurrection of Marduk. This tablet is discussed by G. A. BARTON in *J. Bibl. Lit.* XL, 1921, pp. 87-103. He shows its relation to other Babylonian myths, to the Egyptian myth of the death and resurrection of Osiris, to the J and the P Documents of the Hexateuch, to the Book of Enoch, and to the Gospel accounts of the death and resurrection of Jesus. In regard to the last point, he concludes that, making the most liberal assumptions, and granting that in some unknown way the Babylonian myth may be the origin of certain minor features of the Gospel story of the resurrection, the addition is so small and relates to such unimportant details that it strikes nowhere near the nerve of the historic facts which underlie the narratives of the resurrection of Jesus.

BAHRIYAT.—*The Location of Isin.*—Practically all the cities of ancient Babylonia have been identified with modern sites; but Agade, the capital of the early Semitic empire of the first Sargon, and Isin, the capital of the rival kingdom of Elassar, have not yet been identified. In *J.R.A.S.* 1922, pp. 430 f. S. Langdon reports that a number of cones of the Isin Dynasty have been unearthed at the mound of Bahriyat, 17 miles south of Nippur. This suggests that Bahriyat is the site of the lost city.

SÂLIHIYAH.—*Mural Paintings.*—At a meeting of the French Académie des Inscriptions, July 7, 1922, Professor JAMES BREASTED described a remarkable series of mural paintings which were discovered in a room of the castle near Sâlihiyah on the right bank of the Euphrates in 1920. A composition of eleven figures shows a sacrifice offered by oriental priests in the presence of the family interested; another represents a sacrifice offered by a tribune before the statue of a deified emperor. These works are not later than the third century of our era. They are valuable not only for the history of Semitic cults, but still more for the history of art, since there are no other comparable products of that Graeco-Syrian style of painting which exercised so great an influence on the art of Byzantium. (*C. R. Acad. Insc.* 1922, pp. 240-241.)

SYRIA AND PALESTINE

FRENCH EXCAVATIONS IN SYRIA.—A brief account of French excavations in Syria in 1921 and of their results as exhibited in the Louvre is reprinted from the *Débats* of March 20, 1922, in *R. Arch.* XV, 1922, pp. 335 f.

THE LAW OF ANTIQUITIES IN PALESTINE.—In *Ant. J.* II, 1922, p. 390, is published Article 21 of the Mandate for Palestine, approved by the League of Nations on July 24, 1922. This article defines antiquities and regulates their sale and excavation.

PAPYRI FROM PALESTINE.—Among the thousands of Greek papyri which have been discovered in Egypt nothing hitherto has been discovered which bears on Palestinian affairs. It is, therefore, a matter for satisfaction that the last big find of papyrus fragments has yielded a number of documents that come from Palestine, or at least deal with Palestinian affairs. They are the records of a certain Zenon, a subordinate official of the Ptolemaic finance minister in Syria, which he brought back to Egypt with him after a long period of service abroad, and deposited in the archives of his villa on the edge of the Fayum. These are described by H. VINCENT, *R. Bibl.* XXIX, 1920, pp. 161-163, and by A. ALR in *Z. D. Pal.* V, XLV, 1922, pp. 220-223.

ASKALON.—Excavations of the Palestine Exploration Fund.—In *Pal. Ex. Fund.* LIV, 1922, pp. 112-119, (pl.), J. GARSTANG reports further work at the mound of Askalon. The most important discovery is the marble cloister of Herod. The length of the colonnade was 84 metres. The cloister was about 5 metres in width, so that the whole building was more than 90 metres in exterior measurement. The columns were 76 centimetres in diameter; the bases were of Attic design well proportioned, and the capitals were Corinthian, of fine first century style and workmanship. Out of this cloister the great mosque of the Caliph Abd el-Melik was subsequently constructed. None of the hoped-for Philistine remains have yet been discovered.

NAHR EL-KELB.—Monuments and Inscriptions.—The pass of the Nahr el-Kelb, or Dog River, near Beirut, is the natural gateway from Mesopotamia into Syria; hence its possession was regarded by the ancient monarchs as a symbol of their authority over the lands at the eastern end of the Mediterranean. The Egyptian king Rameses II erected three stelae and inscriptions here. There are six Assyrian monuments, the latest being that of Esarhaddon, one of Nebuchadrezzar II, and possibly one from a Hittite monarch. These have been carefully studied and published in photograph and transcription by F. H. WEISSBACH in *Wissenschaftliche Veröffentlichungen des Deutsch-Türkischen Denkmalschutz-Kommandos*, VI, 1922, pp. 1-56 (14 plates, 16 figs.). See also E. UNGER in *Z. Assyriol.* XXXIV, 1922, pp. 96-100; and E. MEYER in *Z. D. Pal.* V, XLV, 1922, pp. 226-228.

ASIA MINOR

BALLEQ KILISSÉ.—Epigraphic Confirmation of an Isolated Biblical Textual Reading.—In Gen. xxii, 12 the ordinary Septuagint text reads: "Lay not thy hand upon the child." Instead of this, one codex reads: "Lay not thy sword upon the child." This curious reading is confirmed by an inscription that accompanies a fresco in the chapel of Balleq Kilissé, about thirty kilometres south of Urgub in Cappadocia. This is reported by G. DE JERPHANION, in *Biblica*, III, 1922, pp. 444-445.

COLOPHON.—Excavations of the Fogg Museum.—In *Art and Archaeology*, XIV, 1922, pp. 256-260 (3 figs.). H. N. FOWLER gives a brief account of the recent excavations at Colophon, conducted for the Fogg Museum of Harvard University and the American School at Athens under the direction

of Dr. Hetty Goldman. A summary of the discoveries of 1922 will be found in the present number of the JOURNAL, pp. 67 f.

HALICARNASSUS.—A Statue of a Barbarian.—G. KARO (*Ath. Mitt.* XXXV, 1920, pp. 160-162; pl.) publishes a life-size statue of marble found at Halicarnassus, representing a barbarian seated with legs crossed. The arms, head and feet are missing. The figure is clad in a short, doubly-girded woolen garment; the rounded point of a long cap is still to be seen on the back of the statue. The right arm was extended; the left rested on the upper part of the left leg and apparently held some object. The workmanship is of about the second century A.D. This seems to be the first Greek statue to represent a human being in this posture. The nationality of the barbarian is uncertain.

HALICARNASSUS.—A Dedicatory Inscription.—U. VON WILAMOWITZ-MOELLENDORFF (*Ath. Mitt.* XXXV, 1920, pp. 157-160; pl.) publishes an inscribed base, originally supporting a bronze statue, found at Halicarnassus. The inscription consists of two elegiac distichs and describes the statue as a tithe offered to Apollo by Panamyes, son of Kasbollis, probably the Panamyes of the Lygdamis inscription (Dittenberger, *Sylloge*², 45). Noteworthy is the dialogue form of the epigram, the writer asking the stone to tell the name of the dedicator. The letters are finely carved, and the whole is free from archaic characteristics.

GREECE

ACTIVITIES OF THE FRENCH SCHOOL AT ATHENS.—In *C. R. Acad. Insc.* 1922, pp. 63-69, E. CHATELAIN reports on some of the studies and explorations of the French School at Athens in 1920-21. L. Renaudin has excavated five rock-cut tombs at Skinochori, near Argos. The remains indicate that these were used for successive burials. M. Renaudin distinguishes four classes of vases found in these tombs: (1) Vases of rough clay, undecorated; (2) vases decorated with a uniform coat of color, usually inside; (3) vases with ornament painted on the natural ground of the clay; (4) vases with ornament painted on a slip. The shapes are somewhat heavier than those of similar vases from the islands. Most of the pottery from these graves is of the Late Helladic period. M. Renaudin also reports the examination of a number of burial mounds in Macedonia, in the region of Pangaeum and in the district southwest and south of Drama. M. Laumonier has written the official report of the excavations of the School at Thasos in 1921. The agora has been further uncovered. It has been shown that its three stoa did not exist in the fourth century B.C., and that they were not built at the same time. The details of their order can be restored. The mediaeval ruins, included in the Genoese fortifications which considerably injured the agora, have been studied. Georges Daux has presented a memoir on his investigation of the Sicyonian Treasury at Delphi. The foundations of this building have been removed block by block, and have been photographed at each stage of the work. The re-used blocks in this foundation were grouped by kinds on a single side of the structure, and suffered little alteration except slight adaptation to their position. They include parts of a stylobate, a stereobate, and a pavement, of columns, capitals, orthostatae, architraves, etc. The investigation is still unfinished, but M. Daux presents these tentative conclusions: (1) The structure at the left of the Sacred Way, in front of and at the foot of the bastion

which supported the Treasury of Siphnos is to be identified as the Treasury of Sicyon. (2) Some architectural fragments in the foundation prove the earlier existence of a rectangular building, to which the sculptured metopes belonged. The column fragments indicate that this was a peripteral structure. It is to be assigned to the first half of the sixth century B.C. (3) A number of curved pieces, from stylobate to cornice, show also the former existence of a circular building. The absence of guttae points to a date earlier than that of the rectangular building, about 600 B.C. This is the oldest known example of a peripteral tholos. (4) Fragments of curved contour which cannot be assigned to this tholos suggest the conjecture that there was a second circular building. *Ibid.* 1922, pp. 257-258, is an extract from a letter of M. CHARLES PICARD, director of the School, describing some of the more recent investigations of the School. At Thasos the excavation of the theatre has been completed, the fine north portico of the agora has been brought to light, and a new temple, perhaps the Metroon, has been discovered. The peribolos of the Dionysium has been established, and numerous interesting inscriptions have been found. A Dionysium has been discovered at Philippi, and the excavation of the temple of Silvanus has been completed. The *toumba* Drkili Tasch has proved to be rich in prehistoric terra-cottas. At Delphi M. Demangel has continued his study of Marmaria. In excavating below the level of the poros temples he has reached a neolithic level, marked by flints, obsidian blades, etc. Above this is an important Creto-Mycenaean level, in which Cnossian idols, small bronzes, and double axes have been found. M. de la Coste has made a study of the sculpture of the Athenian Treasury, and has succeeded in making about forty new combinations of fragments.

CNOSSUS.—Excavations in 1922.—In *Ant. J.* II, 1922, pp. 319-329 (7 figs.) Sir ARTHUR EVANS reports the resumption of excavations at Cnossus in the spring of 1922. The campaign was directed by Sir Arthur himself, assisted by Dr. Mackenzie, Mr. F. G. Newton, and Mr. Piet de Jong. An important discovery was made in the village of Arkhanes, about an hour's ride from Cnossus, under the peak of Mount Juktas. The central part of the village rests on the substructures of a building which may have been the summer palace of the kings of Cnossus. It was impossible to excavate this structure; but building operations in another part of the village permitted the clearing of a large circular cistern of massive construction, belonging to the Late Minoan I period, as the sherds found in it proved. A flight of steps descends into the cistern; and it is equipped with a conduit to prevent it from overflowing. Near the north entrance of the palace at Cnossus were discovered the foundations of a bastion enclosing the pillar hall on that side. A magazine for oil jars was also found near this entrance. In the northeast house were numerous fragments of M. M. III and L. M. I jars. The seal of an officer who had charge of vessels of precious metals was found here. The structure called the Magazine of the Arsenal, below the paved way which leads from the west to the northern part of the palace, was further investigated, and yielded bronze arrow-heads and inscribed clay tablets. It was found that this building lies over the remains of another of earlier date and similar use. The area of the west porch, which was the state entrance of the palace, was more fully cleared, and it was shown that there was a separate lodge for the warder, as in other Minoan structures. The later corridor leading from this state entrance to the

interior ran south; but an earlier corridor turned to the east, and led to the great columnar hall in this part of the palace. North of this hall the excavators found the remains of a stepped portico which faced the central court. This portico gave access on the left to a corridor by which the columnar hall was reached, while on the right it was faced by a flight of steps, of which twelve were discovered, leading to rooms in the second story. This is the first clear evidence of a second story on this side of the court; and the remains are sufficient to allow the drawing of an elevation of the part of the façade bordering the Throne Room. Near the southeast angle of the palace were found the remains of two houses of M. M. III date, encumbered by great blocks of the palace walls, which had been thrown into them by an earthquake. This was striking evidence of the fact that the catastrophe which destroyed the earlier palace of Cnossus was seismic. The houses contained rich ceramic remains of the Middle Minoan period. In one were the skulls of two oxen, together with tripod altars of painted terra-cotta, indicating a propitiatory sacrifice to chthonic powers before the filling-in of these houses. The excavation of the vault within the neighboring palace angle led to the discovery of a floor at the depth of thirty feet. On this opened an artificial cave, approached by rough-hewn steps. It may have been planned as a cage for lions; and it is conjectured that in a tradition of such a den, fused with that of the prominence of bulls in Minoan ritual, originated the myth of the Minotaur.

DODONA.—Recent Excavations.—In *R. Et. Gr.* XXXIV, 1921, pp. 384-387, G. SOTERIADES reports briefly his recent excavations at Dodona, the first attempted since the discoveries made by Carapanos in 1875. He has cleared the gate of the peribolos, bringing to light the bases of the door-posts, and even the cuttings for the hinges on which the doors turned. In the study of the temple site it was necessary to remove a thick growth of oaks and a mass of debris from the former excavations. At a point southeast of the temple, where Mr. Soteriades hoped to find the great altar, appeared remains of a considerable structure which was apparently an exedra. In its foundations were found five triglyphs in soft stone, probably from the temple which was destroyed not later than 221 B.C. The stylobate and columns which Carapanos attributed to the ancient temple belong to a construction which is purely mediaeval, the church upon the temple site. The recent investigations have shown the existence of good Hellenic walls beneath the walls of the church. The building to which these walls belonged had an orientation somewhat different from that of the church. A few fragments of terra-cotta revetments probably covered architectural members in wood or soft stone. A large fragment of a terra-cotta cornice, ornamented with painted palmettes, was discovered.

MYCENAE.—Excavations in 1922.—In the *London Times Literary Supplement*, 1922, October 26, p. 64, A. J. B. WACE reports the results of the third season of excavations carried on at Mycenae by the British School at Athens. The clearing of the large chamber tomb near the highway (Tomb 505) was completed in spite of mechanical difficulties, and the tomb proved to be one of large dimensions, twenty feet square and twenty high. It had been thoroughly plundered in ancient times. The so-called "Tomb of Aegisthus," a domed tomb between the "Tomb of Clytemnestra" and the Lions' Gate, originally discovered by Tsountas, has been cleared. It is built of small lime-

stone slabs wedged together; the interstices are packed with yellow clay. The dromos was of rubble construction, similarly packed. There was no triangular relieving slab above the lintel. Although the tomb had been looted, fragments of gold leaf were found, and a great mass of pottery, including remains of a number of enormous jars, painted with naturalistic designs. The excavation has permitted a chronological classification of the bee-hive tombs: (1) Primitive tombs built of small slabs of soft stones; (2) tombs in which large stones are used, with a façade of soft limestone; (3) tombs showing the height of technical skill in the handling of heavy blocks and the carving of hard stone. The "Treasury of Atreus" and the "Tomb of Clytemnestra" belong to the last class. Mycenae was ruled from about 1600 to about 1500 by the Shaft Grave kings. The Tholos Tomb dynasty reigned from about 1500 at least until the thirteenth century B.C. Several tombs were excavated in the Kalkani cemetery, and yielded a great many interesting small objects: gold rings and beads, signet seal-stones, glass, paste, and amber beads. An almond-shaped amber bead shows on one side a bull carved in intaglio. A magnificent series of painted vases of about 1500-1400 B.C. was found in Tomb 515. Tomb 592 showed a series of successive burials, and it was possible to sort the funerary offerings associated with each. The pottery in this tomb included a magnificent jar with an octopus design, and a small vase with a naturalistic design of nautili. A steatite seal of Asiatic type and two scarabs of the eighteenth dynasty were found in this cemetery, pointing to the oriental relations of Mycenae. In Tomb 515 some gold ornaments were discovered, in spite of the fact that the tomb had been robbed. But the excavation of this cemetery has made it increasingly clear that it was the late Mycenaean who plundered the tombs of their predecessors. The pottery found has been deposited in the Nauplia Museum. On the acropolis the site of the propylon has been identified. It seems to have been a porch with one column between antae, after the plan familiar at Knossos and Phaestus. At the head of the great stone stairway soundings below the antechamber to the throne room revealed the existence of a basement with a rectangular pillar in its center. This belonged to an earlier stage of the palace, and had been filled before the stair was built. It recalls, of course, the pillar basements of Crete. An inscription of about 200 B.C. was found near the road which leads up from the Lions' Gate, and proves that Mycenae was not completely destroyed in the fifth century, as has been supposed, but was a prosperous, though small city in the Hellenistic period. It has also been shown that there was no prehistoric "Lower City." Mycenae in the Bronze Age was a fortified palace, and the subjects of the Mycenaean kings lived in scattered villages. Schliemann was right in assigning the walls of the so-called Lower City to the Hellenistic age.—*Ibid.* November 16, 1922, p. 747, Sir ARTHUR EVANS, commenting on Mr. Wace's report, states that the steatite sealstone described by Mr. Wace as showing the character of an Asia Minor type is quite certainly one of the class of Anatolian bullae described by Mr. Hogarth in his *Hittite Seals*. Its discovery at Mycenae is important for the chronology of the period. The cemetery in which it was found is at least as old as 1500 B.C., and has no burials later than 1200. Sir Arthur also points out evidence of knowledge of the art of writing at Mycenae. Characters painted on a late Mycenaean "stirrup" vase are of familiar Minoan linear type; and similar letters appear on vases from the Late Palace at Tiryns.

Keramopoulos discovered in the "House of Cadmus" at Thebes a vase which showed painted characters, many of which were of the earlier type of linear script; but some new forms also appeared here. The mainland writing also shows the influence of Late Cretan script (Evans's Class B).

ITALY

ALATRI.—An Altar of the Penates.—In *Not. Scav.* XVIII, 1921, p. 411, G. MANCINI reports the discovery at Alatri, in the Piazza Rosa, of a small altar dedicated to the Di Penates. It is a cippus of local limestone 76 cm. by 33, with a base 47 cm. square. The name of the deities is in the older and rarer genitive. Mancini adds a brief account of the Penates, and assigns the inscription to the beginning of the empire.

AMELIA.—An Inscription.—In *Not. Scav.* XIX, 1922, pp. 80–81, G. MANCINI publishes a fragmentary municipal inscription, found in the commune of Penna in Teverina, Amelia. It relates to the dedication by a *sevir Augustalis* of a statue of Victory, accompanied by a distribution of mead (*mulsum*) and cakes (*crustum*) to the populace. Near by were the traces of an ancient Roman road; on the opposite side of the Rivo Grande is the base of a monument of unknown nature and nearer the Tiber are the remains of a bridge which in ancient times connected Penna in Teverina with Orte.

ANTIUM.—A Pre-Julian Calendar, and Fasti.—In *Not. Scav.* XVIII, 1921, pp. 73–141, G. MANCINI publishes fragments of a calendar and of *fasti*, discovered in a small room of the *crypta Neroniana* at Antium in March, 1915. Since a part of the room had been destroyed by the caving in of the bank, a great part of the inscriptions is irretrievably lost. Some three hundred fragments, painted upon stucco, were found, large, small, and minute; and they have been put together with great patience and difficulty. The stucco consisted of two layers, of which the outer one was very fine and tinted white. On this the calendar was painted in fresco, very accurately, in black and red letters. It was all inscribed upon one wall, with the months, including the intercalary month, or *merkedonius*, in separate columns, and was surrounded by a black border edged with white 35 mm. in width. It occupied a space 1.16 m. by 2.50. The letters were of two dimensions and in two colors. The *nundinae*, the *Kal.*, *Non.*, and *Ides*, and the fixed festivals were in larger letters, the *feriae* in smaller. The *nundinal* letters are invariably in black, except A, which is red. The letters which indicate the nature of the days (N, F, etc.) are in black, except those which follow the designations *Kal.*, *Non.* and *Eidus*. Fixed festivals are in red. At the top of each column are the names of the months (abbreviated) in black, and at the bottom the number of days in the month in alternate black and red. The *nundinal* letters differ from those in all previous calendars, corresponding to the so-called year of Numa, and of course *Quintilis* and *Sextilis* are the designations of July and August. Mancini gives a summary of the development of the Roman calendar and a list of the examples already found, all of which are post-Julian. He then points out the variations of the newly discovered fragments in a complete analysis, day by day. There are reproductions of the calendar in colors, and of the *fasti* in black. The fragments of the *fasti* were found in the same place. They include the years 163 to 84 B.C., but it is impossible to say whether they were originally complete or were limited to that period; also whether they were painted on

the same wall as the calendar or on another wall of the same room: Mancini inclines to the latter opinion. The text was in three columns, each including thirty-three years and occupied in all a space of 1.24 m. in width and about 1 m. in height without the border. The *fasti* also are in two colors, the *censors* and *consules suffecti*, the lustrations and abdications, and the figures indicating repetition in office, or death, being in red. Mancini believes that the three columns were not written by the same hand, and that the first two are the work of the man who painted the calendar. The fragment fills in part the lacuna in the *Fasti Capitolini* and offers some slight variations from the other *fasti*. The calendar and *fasti* seem to have been written before 55 B.C., since there is no mention in the former of Pompey's temples at the top of his theatre; and this date is supported also by the palaeography of the inscriptions.

ARICCIA.—A Colossal Statue of Artemis.—In *Not. Scav.* XVIII, 1921, pp. 385-410, G. LUGLI reports the discovery in the vineyard of Sig. Vincenzo Ciuffa at Quarto Cese, Ariccia, in March 1919, of a colossal statue of a female deity (Fig. 1). The statue was found at a depth of one metre below the surface, lying face downward on an ancient pavement of marble slabs, separated from it by 30 cm. of earth. It was draped and lacked the head, arms, and left foot, which were made separately and attached to the body. When the statue was lifted, the head was found beneath it, well preserved except for corrosion from contact with the earth; it lacks only a part of the nose, the lower lip and the lobe of the right ear. The statue weighed over five tons, but with some difficulty it was transported to Rome. Excavation showed that it stood in a large rectangular hall, having an apse at one end 5.30 m. in diameter. In the apse was the base of the statue, a pilaster of square blocks of peperino coated with slabs of cippolino. The room had a mosaic pavement and near by were other rooms, which with it formed part of a Roman villa. Brickstamps indicated that the room was built in the first century of our era; the statue must have been placed there within the first decade of the following century. The left foot and right shoulder were found later, but the arms were probably lost in antiquity. The height of the statue



FIGURE 1.—COLOSSAL STATUE OF
ARTEMIS: ARICCIA.

FIGURE 1.—COLOSSAL STATUE OF
ARTEMIS: ARICCIA.

without the plinth is 2.86 m. It is of Greek marble, the head, right shoulder and left foot of Parian. The back is not highly finished and was evidently not intended to be exposed to view. The statue seems to be a copy of an original in bronze, made in the time of the Flavians or of Hadrian. There are several other copies in existence of the same original, which Lugli believes to be a work of Phidias. He thinks that the Artemis of Ariccia and the Demeter of the Villa Mattei are copies of the two bronze statues by Phidias which Pliny (*N. H.* XXXIV, 54) says were dedicated by Catulus in the temple of Fortuna Huiusce Diei.

ARQUA PETRARCHA.—A Conduit.—In *Not. Scav.* XVIII, 1921, p. 177, A. ALFONSI reports the discovery at Arqua Petrarcha of a Roman conduit, 65 cm. broad, running north and south. No means of determining its date were at hand.

BAIAE.—Roman Baths.—In *Not. Scav.* XVIII, 1921, pp. 412-414, A. LEVI reports the discovery of the ruins of Roman baths in a quarry on the estate of the Hon. Strigari at Baiae. They consisted of a series of rooms of small dimensions, coated with painted stucco, and several reservoirs with barrel vaults. These remains stand near the line of ruins which follow the bath known as the temple of Mercury and are parallel with another called the temple of Venus. This row of *thermae*, according to Beloch, formed the ancient *Silva Baiana*.

BOLOGNA.—Discoveries in the City and in the Suburbs.—In *Not. Scav.* XVIII, 1921, pp. 1-36, G. GHIRARDINI tells of the unearthing of ancient pavements, which indicate that the *decumanus maior* of the ancient city of Bononia followed the course of the present Via Rizzoli. This street, which has the same direction as the Via Aemilia, was known in the Middle Ages as *Forum de medio* and later as *Mercato di mezzo*. In the wall of an old house in the area of the Palazzo Ronzani there was found a headless reclining statue of a nymph in Parian marble, which evidently formed the decoration of a fountain. It is a mechanical copy, not earlier than the second Christian century, of a fourth century Greek type and suggests Timotheus. In the same place were found a head of Bacchus, poorly executed in Luna marble, a leaden bust of Silenus, and terra-cotta fragments with decoration of the Villanova type. In the Via Rizzoli were found many fragments of vases, Roman and Arretine, lamps, etc., with some 135 ceramic inscriptions. In the Via Foscherari a bronze bust came to light, 155 mm. in height, hollow and open at the ear. It is perfectly preserved and represents a female head wearing a mural crown adorned with gates and towers. The style recalls the Alexandrian period and the type Cybele, but since the wall which is represented on the crown is that of the Roman *castra* or *oppidum*, we probably have a personification of the city of Bologna. In the Via dei Mille, at a depth of 2 m., mosaic pavements were found belonging to a group of buildings of which one room was discovered in 1914; they have floral and geometric ornaments and in the centre of one of them is a *gorgoneion*. An account is also given of massive foundations found in the bed of the river Reno, along with nine inscriptions.

CALABRIA.—In *Not. Scav.* XIX, 1922, pp. 147-186, P. ORSI recounts various discoveries in Calabria. At Monasterace Marina was discovered a deposit of ancient terra-cottas belonging to a temple, the most beautiful and sumptuous objects of the kind ever found in Calabria, and rivaling the *cima* of Metapontum. They were purposely concealed and came from a temple be-

longing to a period not much earlier than the middle of the fifth century, along with some objects belonging to the sixth century. At Lazzaro a tomb was found with small objects in gold. An extended account is given of the discoveries at Reggio from 1911 to 1920, including a number of inscribed statue-bases, of Augustus, of Flavius Constantius, and others. During the building of the new prefecture extensive Roman baths were found, which were only in part uncovered and represented by a plan. In three other parts of the city building operations disclosed *thermae*, showing that the ancient city was well provided for in that respect. Part of an odeum or theatre (the semicircle of the lowest part of the cavea measures 20 m.) was partly uncovered, revealing seven *cunei* with six passageways; the building is not later than the third century before our era. In a suburb of the ancient Rhegium, in the territory surrounding the village of S. Caterina, Greek tombs of the third and second centuries were found. In the baths under the new prefecture two dedicatory inscriptions to Hadrian of the year 120 were found; an old plan of Federico Barilla, made in 1810, seems to be connected with these baths and is reproduced in the article.

CASAMARI.—Miscellaneous Antiquities.—In the district called Antera, northeast of the abbey of Casamari and in the territory of the ancient Ceriata Mariana, was found a trench with votive offerings of terra-cotta, coins, lamps and other small objects; also five inscriptions. (G. MANCINI, *Not. Scav.* XVIII, 1921, pp. 66-71.)

CASTELVECCHIO SUBEQUO.—Recent Discoveries.—A little more than twenty kilometers from Sulmo on the Via Marsicana leading to Aquila is the little district of Castelvecchio Subequo. Near by, in the Campo di Macrino is the site of an ancient *oppidum*, indicated by walls, pavements, etc., a short distance below the level of the campagna. In 1920, in the course of local improvements, numerous bronze objects of a votive character were found on the site. These were statuettes and coins, including four uncial asses with Janus and a ship's prow, a silver denarius of 83 B.C. (L. Rubrius), a cippus in the form of a truncated pyramid, having an inscription in Latin with some dialectic peculiarities and containing the name Seius, and several other uninscribed cippi. The remains date from the second and first pre-Christian centuries. Just outside of Castelvecchio Subequo was found a Roman sepulchral inscription, perhaps from a necropolis of the first century of the Empire. (G. BENDINELLI, *Not. Scav.* XVIII, 1921, pp. 284-290.)

CHIUSI.—Recent Discoveries.—In the course of excavations along the road of circumvallation between the Museum and the public laundry, a road which was probably related to the encircling wall of Chiusi, two ancient communicating wells were found and a third near a stretch of Roman road. One of the wells, 18 m. in depth, communicated with the other by means of a channel. Fragments of pottery were found belonging to various periods: primitive Italic, pseudo-Arretine, and Roman. In the middle of the communicating channel was a quadrangular room 2 by 2 m. On the left-hand side of the area behind the Museum was found the fragment of a Roman road, paved with polygonal blocks of travertine from Sarteano which were deeply scored by wheel marks. It runs north and south. Near it is a so-called bottle-well 22 m. deep with a diameter of 1.40 at the top and 3 m. at the bottom. (E. GALLI, *Not. Scav.* XVIII, 1921, pp. 337-340.)

CIRO.—Recent Explorations.—In *Not. Scav.* XVIII, 1921, pp. 490–492, P. Onsi reports on explorations in the territory of the ancient city of Crimisa. At upper Ciro in 1914 a pre-Hellenic necropolis was found with fourteen skeletons and articles in bronze and terra-cotta, which were deposited in the Museum of Cotrono. They were of the same type as those found in the Sicilian suburbs of Locri and at Torre Mordello. On the Cozzo or Colle Leone, a high sandy hill north of Ciro, formerly the site of an Hellenic temple, there were found the remains of bronzes, etc., of the fifth and fourth centuries B.C., including a bronze plate with writing of the fifth century, containing the will of a certain Philo, who left all his property to his wife Zaoitycha. This was published by Comparetti, Florence, 1915. Explorations on the coast between Porta Alice and Ciro Marino in search of Crimisa gave negative results, although it is clear that upper Ciro was the site of an unknown city, which may have been Crimisa. Others place the ancient town five kilometers to the south, near Lipuda.

CIVITELLA S. PAOLO.—A Necropolis.—In *Not. Scav.* XIX, 1922, pp. 110–137, G. BENDINELLI gives an account of excavations carried on in 1920 at Civitella S. Paolo in the district of Monte S. Martino (*ager Capenatus*), a locality rich in ancient remains and the scene of many illicit excavations, but where no official and systematic explorations have been made. The work resulted in the unearthing of twenty-four tombs, including several chamber tombs and one of unusual size, with numerous objects in terra-cotta, bronze, gold, iron, alabaster and bone. Some of the tombs (ten in number) were early, although none antedated the seventh century B.C.; others, all of which were inhumation tombs, belonged to the last two centuries of the republic. The objects found were of fine quality, and some of the bronze mirrors showed traces of the original burnishing.

COTRONE.—Marbles Recovered from the Sea.—In *Not. Scav.* XVIII, 1921, pp. 493–496, P. Onsi reports the discovery of ancient marbles under the sea at Port Scifo, a short distance below Cape Colonna, near Cotrono, the same place in which a similar discovery was previously made (see *Not. Scav.*, Suppl., 1911, pp. 118 ff.). There were eleven shafts of columns, badly corroded, except where they had been covered with sand; five cippi, five labra, and half a dozen bases or supports for statues and the like; a marble tablet; and fragments of wood belonging to a vessel. Several fragmentary inscriptions are published, but the details of the marbles are reserved for a monograph. The amount recovered is estimated at 150 tons. The names of the consuls for 197 and 200 A.D. occur.

ESTE.—Recent Discoveries.—In the district known as Murlongo, at a depth of 3 m. a stele was found in the form of a truncated pyramid 60 by 16 cm., with an old Venetic inscription (A. ALFONSI, *Not. Scav.* XVIII, 1921, pp. 178–79). In the locality called Casale there was brought to light a well of the Roman period and not far from it the foundations of a massive wall with smaller intersecting walls, evidently belonging to some public building. The well was 6 m. in depth and 2.50 in diameter. There were found numerous small vases, lamps (one inscribed *fortis*), a bronze plate (not oxydized since it had been covered with water), a frying-pan with a long handle, an iron implement with four points and a hole in the middle, somewhat like a small rake, a hatchet, a crescent-shaped knife with two lateral handles, a long spit, and

fragments of stone and wood; the latter consisted of parts of beams, perhaps in chestnut. (A. ALFONSI, *Ibid.* XVIII, 1921, pp. 293-4.) At Sant' Elena, near Este, a *sepulcretum* of 350 square metres was found, with small objects and two inscriptions. (A. ALFONSI, *Ibid.* XVIII, 1921, p. 295.)—*Ibid.* XIX, 1922, pp. 1-54, the same author gives an account of discoveries in the necropolis at Este during three campaigns in 1907-8-9. The report was ready in 1911, but its publication was delayed. Tombs to the number of 223 were found, of which 174 belonged to the pre-Roman period and 49 to Roman times. The latter were found together in a sepulchral area divided into two parts. Only three inhumation graves were found, in which the skeletons were lying in the bare earth without funeral offerings. Among the finds were pottery and vessels of bronze, lamps, fibulae and other small bronze articles, and some inscribed funerary cippi. The report is followed (pp. 55-56) by an obituary notice of Alfonsi, who died in 1922, written by F. Barnabei.

FALERONE.—Coins and Other Antiquities.—In *Not. Scav.* XVIII, 1921, pp. 179-196, G. MORETTI reports a number of chance discoveries made in the course of work in the vineyards at Falerone in Picenum. They include a hoard of Roman coins in debased metal and in bronze; walls and a mosaic pavement, with a geometric pattern, in an excellent state of preservation; a rough travertine sarcophagus 2.20 m. by .90 by .48 containing a skeleton and 25 glass vials, all but two of which were well preserved; a trunk-shaped cinerary urn in travertine .34 m. by .405 by .30, containing ashes; slabs with parts of reliefs of gladiators; various architectural fragments and small objects.—*Ibid.* XIX, 1922, pp. 59-76, the same scholar describes the hoard of Roman coins, which weighs nearly 30 kilograms. There were some 8000 pieces, of which 7400 were silver and the remainder bronze, the larger number being Antoniniani from Julia Domna to Postumus. The others, mostly large bronzes, run from Domitian to Gallienus. There are a few rare pieces, but the collection, which was taken to the museum at Ancona, is principally valuable for its excellent state of preservation and the opportunity which it gives for the study of chronology and minting; mints in Rome, Milan and the orient are represented.

FERENTO (VITERBO).—A Sepulcretum.—In *Not. Scav.* XVIII, 1921, pp. 215-228, C. ZEI reports on excavations on the hills called Lupa and Lestra at Ferento, resulting in the discovery of twenty sarcophagi, of which five were decorated with reclining figures on the cover, while many had inscriptions of the family of the Salvii and other families. Various small objects were found, including two *teserae lusoriae*. *Ibid.* pp. 228-229, G. BENDINELLI gives a note on the inscriptions. The finds date from the last half century of the republic, but there are indications that the sepulcretum goes back in its origin to the end of the second century B.C.

FERENTO.—A Statue of Eros.—In *Rass. d'Arte*, IX, 1922, pp. 145-154 (7 figs.), E. GALLI publishes a statue of a winged youth in Pentelic marble found, along with other statues, twenty years ago in excavations at Ferento. The statue is of the type which Furtwängler interpreted as Pothos, of the Aphrodite group made by Scopas for Samothrace. The present author sees in it, rather, Eros in his capacity of divinity of the elemental forces of nature and, therefore, bi-sexual in character. We may believe, then, that the Ferento statue, among many Roman copies of the same original, gives us the best and

most faithful copy that we have of the Eros which Praxiteles made for the city of Thespieae, in Boeotia.

FRASCATI.—Recent Discoveries.—In *Not. Scav.* XVIII, 1921, pp. 383–384, G. BENDINELLI reports various discoveries on the estate called Corvio, near Frascati, at the twelfth milestone of the Via Labicana, not far from the station of Pantano on the tramway from Rome to Fiumicino. They include two brickstamps (*C.I.L.* XIV, 4091, 29 and 31), an inscription of a freedman of *D. Valerius Asiaticus*, who is, perhaps, the consul of 69 A.D. This inscription has the new expression *scriba librae*, equivalent to *scriba librarius quaestorius*. On the summit of a hill, on which there is a fine bit of the Via Labicana about 30 m. in extent, were the remains of what seems to be a *villa rustica* of the late imperial period, built over an earlier one.

GROTTOFERRATA.—Roman Villas.—In *Not. Scav.* XVIII, 1921, pp. 275–276, G. MANCINI describes the ruins of Roman villas on the hill called Ginestre at Grottoferata. They consisted of traces of four small communicating rooms, fragments of painted stucco and colored marbles, and architectural fragments, all apparently belonging to a fine *villa rustica* of imperial times. Additional interest is given to the find by the fact that Cicero's *Tusculanum* included the *colle delle Ginestre*. Just beyond the thirteenth kilometer of the Via Anagnina, on the left as one goes out from Rome, traces of another villa were found, having waterpipes inscribed *C. Cornelius Agathangelus fecit*; this name occurs also in a funerary inscription (*C.I.L.* XIV, 2526). Coins were found dating from Augustus to Valerian and brick-stamps of about 113 A.D.

GUALDO TADINO.—Three Tombs.—In *Not. Scav.* XIX, 1922, pp. 76–79, E. STEFANI reports the chance discovery of three ancient tombs at Gualdo Tadino in Umbria, containing parts of skeletons, fragments of pottery, small objects in bronze and amber, bracelets, a crescent-shaped knife or razor, and a bronze cyathus.

LOTZORAI.—Pre-Roman Bronzes.—In *Not. Scav.* XVIII, 1921, pp. 496–498, A. TARAMELLI reports the discovery of objects in bronze of the pre-Roman period at Genua Tramonti (Lotzorai). There were a double-edged axe, three hatchets, and a hammer-head. The axe is of the type common in Sardinia, 27 cm. by 45 mm., and is of fine workmanship. The hatchets also are of the usual Sardinian type, but the hammer-head is a rarity among the bronzes of the country. It is nearly cylindrical in form, but is slightly larger in the middle than at the ends. There is no hole for attaching a handle, but two circular knobs or knots apparently served that purpose.

MEDOLE.—A Bronze Head.—In *Not. Scav.* XIX, 1922, pp. 57–58, G. PATRONI reports the discovery at Medole of a bronze head of fine Roman workmanship, with which was found a middle bronze of Augustus. The head, which resembles that of the Apollo of Florence, is of the type of the Sauroctonus of Praxiteles. A ring in the top of the head indicates that it was used as the weight of a steelyard, as does also the fact that it is partly filled with lead to add to its weight. It is 123 mm. in height.

MENTANA.—In *Not. Scav.* XVIII, 1921, pp. 55–62, R. PARIBENI tells of the discovery of the foundations of a *villa rustica* in the territory of Mentana, in the district called Romitorio. Besides fragmentary inscriptions and small objects of various kinds there were found a portrait head in Luna marble of a bearded Greek above life size, a good Roman copy of a fourth century original

(Fig. 2). It resembles the so-called Heraclitus in the Capitoline Museum and is evidently the portrait of a philosopher. Another find was a statuette in marble, 56 cm. in height, with the feet missing. The head is crowned with grape leaves and has long hair falling in two braids on the shoulders. The youthful face is perfectly preserved except the end of the nose; the body, nude except for a fawn-skin, is agile and active. The attitude of the statue, which is a good Roman copy, is Praxitelean. There was also found a bronze statuette the yellow patina of which is due to its long submersion. It is one Roman foot (29 cm.) in height. It represents a young boy, nude, standing with the left leg slightly flexed. He has long hair and a small head, and holds in one hand a top and in the other a whip. Parts of the figure, especially the feet, are finely modelled, but the head is too small, the hands are too large, and there is a lack of expression. The body is that of a child in the fulness of the limbs, but that of a youth in the proportions of the frame; it is an example of Roman shop-work. The subject occurs frequently in vase paintings, but has never been found before in a statue in the round, and Paribeni fails to find it in reliefs. Additional discoveries were an inscription to *Dis pater*, and a stamp with the name *Eutychi* in Greek letters, but with a Latin case-ending.

MONTALTO DI CASTRO.—An Etruscan Vase.—A black-figured hydia found in fragments a few years ago at Montalto di Castro, and since restored at the Villa Giulia, is published by G. BENDINELLI in *Boll. Arte*, II, 1922, pp. 97-106 (3 figs.). The decoration gives very spirited representations of hunting scenes. The vase belongs in the group of imitations of Greek work—with Ionian art as the chief source of inspiration—of which the centre of manufacture was the ancient Tarquinia. It is to be dated in the early fifth century, after the Greeks had adopted the red-figured style of vase decoration.

MONTELEONE CALABRO.—Ancient Remains.—In *Not. Scav.* XVIII, 1921, pp. 473-485, P. ORSI tells of the results of excavations carried on in 1916 and 1917 at Monteleone Calabro in the territory of Hipponium—Vibo Valentia. Since the publication of a monograph on the Greek walls in 1830 by Vito Capialbi, these have suffered greatly through their use as a stone quarry.



FIGURE 2.—HEAD OF PHILOSOPHER:
MENTANA.

At present there are exposed 170 m. of a bastioned wall with three semicircular towers. A fourth tower at a corner forms two-thirds of a circle. The average thickness of the wall is 2.80 m. and 3.40 m. at the towers. On the height called Cofino the foundations of an Ionic temple 27.50 by 18.10 m. were found with remains of Ionic columns and a *cima*. Fragments of painted stucco indicate a vivid coloring. The temple probably dates from the fifth century B.C. On the Belvedere or Telegrafo another Greek temple was found, which must have commanded a view extending from Aetna to Cape Palinurus. Only a part of the foundations remain, 37.45 by 20.50 m., but it is evident that the temple was peripteral. Various fragments of sculpture were found. At Cava Cordopatri there was discovered a small rectangular edifice, 4.50 by 5.70 m., apparently a temple and originally of a larger size; and there are indications of still another temple on the Coltura del Castello. Fragments of terra-cotta were found, referable to types belonging to the period from the fifth to the third century B.C., including part of a fine colossal mask representing a Gorgon's head; also a few fragmentary inscriptions.

MONTELUCE.—Etruscan Vases.—In *Boll. Arte*, I, 1922, pp. 21-37 (10 figs.), E. GALLI publishes two vases of late Italian imitation of Greek work which are significant not only for their elaborate decoration, here fully described, but also for the conditions under which they were found, conditions which date the vases in the third century B.C., and which indicate that one of the late workshops for the imitation of Greek vases was established at Perugia.

MORNICA-LOSANNA.—A Hoard of Republican Coins.—In *Not. Scav.* XVIII, 1921, pp. 298-300, G. PATRONI reports the discovery at Mornica-Losanna near Voghera in the province of Pavia of a hoard of Roman *denarii* of the republican period. A terra-cotta vase contained a weight of coins estimated at 14 kilograms. These were carried off by the finders and only 4.6 kilograms were recovered by the authorities. This amount included 1187 pieces, dating from 217 to 38 B.C. Of these not many were very rare, but some were not common; the number of types was 267. 920 of the *denarii* were coined in Rome, 122 in various Italian towns before 90 B.C., 22 in Spain, 70 in Gaul, 36 in the Orient, 15 in Africa, 2 in Sicily. Five were undecipherable, one was a coin of Juba Rex. The most common was the *denarius* of Julius Caesar coined in Gaul in 50 B.C. with the elephant and the pontifical instruments.

NEPI.—A Chamber Tomb.—In *Not. Scav.* XVIII, 1921, pp. 356-358, G. BENDINELLI notes the discovery of a large chamber tomb of trapezoidal shape at Forano, Nepi, excavated in the local tufa; it belonged to the first half of the sixth century B.C. The contents consisted of *ollae* and other vases, some of which were Corinthian, but none Attic. There was possibly a necropolis on the site.

ORZIBECCHI.—Coins.—At Cascina Colombaia, Orzibecchi, a hoard of 33 *denarii* and five *quinarii* was rooted up by hogs. The coins belonged to a period from 260 to 200 B.C. The greater number were heavy *denarii* of the period before the second Punic war, but some were lighter in weight and of later date. (G. PATRONI, *Not. Scav.* XVIII, 1921, p. 297.)

OSTIA.—Recent Discoveries.—In *Not. Scav.* XVIII, 1921, pp. 235-262, G. CALZA reports the discovery of four interesting new inscriptions at Ostia. At a short distance from the place where the list of 220 Augustales was found (*Not. Scav.* XVIII, 1918, pp. 223 ff.) there came to light the longest inscription

yet known referring to the cult of the Lares. It was not *in situ*, but had been used, in three pieces, to cover the walls of the sacrificial trench of a late Mithraeum near the principal gate of the city (*Not. Scav.* 1920, pp. 161 ff.). Two of these pieces, forming a slab of white marble .96 m. by .63 by .31 with a border, contain the *adsignatio* and *dedicatio* of the place and give a complete text. The third piece is a fragment of the *album* of the college, containing a few names, arranged two to a line. The inscription seems to belong to the time of Severus and Caracalla (205 A.D.). It is poorly written and composed in language that is vulgar and corrupt, with frequent lapses in grammar. Its location in *praeda Rusticeliana* is unknown, although the name Rusticelius occurs several times in the inscriptions of Ostia. The names indicate that the worshippers were humble folk. Calza has some interesting notes on the cult of the emperors; he believes that it was a sporadic feature of Roman religion, which soon became purely formal, and that it was due primarily to devotion to the memory of the founder Augustus. The second inscription is a new fragment of the Annals (see *Not. Scav.* 1917, pp. 180 ff.), containing the record of the years 49 to 44 B.C. It was not found *in situ*, but in material taken from one of the buildings about the Forum, a rather late structure and difficult to identify, situated before, and to the left of, the temple of Vulcan. The fragment is .45 m. by .12 by .5 and is not the work of the same stonecutter as the fragment previously found. It mentions the death of Pompey, Caesar's reform of the calendar, his title of *pater patriae*, and the legacy of his gardens to the people. Caesar's death is not recorded, but is implied in the item last mentioned. The third is a fragment of a calendar, the first as yet found in Ostia. It came from the same building as the fragment of the Annals, and probably both the Annals and the Calendar were kept in one building on the Forum. The various pieces contain one day of March, seventeen of April, and nine of December. The letters are good, but the orthography points to a date not before the Christian era. The fourth inscription consists of two *cippi* belonging to the boundaries of the Tiber, one of which was found by Prince Don Giuseppe Aldobrandini on his estate just outside the city, and the other in explorations made in consequence of his find. They are travertine slabs 2 by .90 m., with rounded tops and inscribed only on one side. They belong to the right bank; for those on the left must have been lost by the erosion of the stream. The inscriptions are of epigraphic interest as a third document relating to the boundaries of the Tiber in the reign of Tiberius is the first one found outside of the city. They also have topographic importance, as helping to trace the progress of the right bank of the river. The position in which the stones were found shows that they finally stood directly in front of, and against, buildings. They contain the names of five *curatores*, of whom only one was previously known, and their date is between 23 and 37 A.D. They show that in the time of Tiberius the care of the Tiber extended to the mouth of the river. Calza believes, contrary to Vaghieri and Carcopino, that the course of the river did not change essentially before 1557 or 1558.—*Ibid.* XVIII, 1921, pp. 360-383, G. CALZA reports the complete excavation of the *horrea* between the Decumanus and the Tiber in the centre of ancient Ostia. They formed a large insula of 10,270 square metres, bounded on the south by the Decumanus, on the east by the Via degli Horrea, and on the west by the Via degli Molini. On the north there was probably a piazza connecting them with

the street running along the river. On the side of the *horrea* facing the Decumanus was a small temple and a series of shops, two of which had been transformed into a Christian church; along the Via degli Horrea was a row of shops. These shops on the Via degli Horrea were solid rooms, made of blocks of tufa, the stands of pearl dealers and silversmiths. The entire *horrea* occupied a rectangular area with its long sides inclining slightly towards the river, isolated by three streets and with the fourth side, perhaps, on a square. The back and the front were of brickwork, the sides of tufa blocks. At a good period nineteen rooms with cross walls of brick were constructed with tufa blocks on the Via degli Horrea. They did not face directly on the street, but were under a portico with travertine columns. Against the back wall of the *horrea* also was a series of rooms, arranged with a flight of three steps to every three rooms. They were not connected with the interior, but occupied a part of a trapezoidal space, being separated by a curtain wall from the constructions on the Decumanus. The *horrea* proper consisted of 64 chambers, facing inward except on the north side towards the river, with a portico of tufa columns occupying three sides of an interior court. Within the court is a series of *cellae*, also surrounded by a portico; both porticoes had been walled up. The side of the building towards the Tiber had a series of chambers facing outward. The *horrea* are shown by differences of technique and workmanship to belong to three different periods, those of Claudius, of Trajan and Hadrian, and of Septimius Severus.—*Ibid.* XIX, 1922, pp. 87–96, G. CALZA gives an account of some recent finds at Ostia, in particular a group of sculptures which shows that the gradual exodus of the inhabitants up to the end of the fifth century did not cause a total dispersal of Ostia's art treasures. Many adornments of temples and public buildings were secreted and thus saved; others were collected at various points to be turned into lime. The group in question was found near a kiln; it includes a fine figure of Artemis, 1.49 m. in height, combining the huntress type of the fourth century with the dress and attitude of an Amazon. Its proportions, which are Polyclitan rather than Praxitelean or Lysippean, suggest a type developed in oriental Greek art and represented with slight variations on numerous coins of Asia Minor. This statue, which lacks the feet and hands, with a part of the left forearm, in addition to some minor injuries, is on the whole in an excellent state of preservation. The head is a Roman portrait of the Julio-Claudian period, substituted for the ideal head of the goddess, a fact which serves to date the statue. Others of the group are a statuette of the youthful Bacchus, 95 cm. in height, on a circular base 20 cm. high; a statuette of Silvanus, 69 cm. in height, lacking the legs, and of late and decadent art; a nude figure of a youth of a type resembling the Lansdowne Hermes, of indifferent workmanship. In a private house there were found a statuette of Venus, of the Anadyomene type, part of a portrait head belonging to the second half of the third century, the upper part of a head of Antoninus Pius, and an excellent portrait of Faustina the elder. There was also part of a marble column in the decadent art of the third century.

PALESTRINA.—The Calendar of Verrius Flaccus.—In *Not. Scav.* XVIII, 1921, pp. 277–283, O. MARUCCI announces the discovery at Palestrina of a new fragment of the Calendar of Verrius Flaccus, measuring 38 by 43 cm. Nothing remains of the designation of the month to which the fragment belongs, or of the nundinal letters, but there are two of the letters which indicate the quality

of the days, in both instances C. The inscription records the second battle of Philippi, in which Octavian was victorious, and the triumph of Tiberius over the Illyrians, both on the same day of the month. By ingenious and plausible calculations Marucchi fixes the two events at the end of October of 42 B.C. and 12 A.D. respectively. Tiberius had an ovation only in 10 A.D., on his return from the campaign against the Illyrians, because the state was in mourning for the defeat of Varus. The reference in this inscription is to his triumph two years later, as is made evident by the expression *curru triumphavit*; see Suet. *Tib.* 16 and 17. The month in which the second battle of Philippi took place has previously been matter of dispute.

PERUGIA.—A Chamber Tomb.—In *Not. Scav.* XVIII, 1921, pp. 341-2, A. PAOLETTI reports the discovery of an Etruscan chamber tomb at Strozza Cappone, excavated in the native travertine. It contained three cinerary urns, with displuviate tops, many vases, but no trace of metal. The funerary furniture, which was poor and of no artistic importance, evidently belonged to some poor family of the last Etruscan period. There were no inscriptions. The pagus at Strozza Cappone, however, on the road from Perugia to Chiusi, was one of importance; for previous discoveries in the neighborhood yielded inscriptions of the powerful Volumnian and Praesentian families.

PIACENZA.—A Cippus.—In *Not. Scav.* XIX, 1922, pp. 58-59, G. MANCINI publishes a funerary cippus with a Latin inscription, found, with the remains of a tomb at Piacenza, 80 cm. below the level of the campagna.

POMPEII.—Recent Discoveries.—In *Not. Scav.* XVIII, 1921, pp. 415-417, M. DELLA CORTE reports the unearthing of a number of villas in private excavations in Pompeian territory. An account of these explorations was written ten years ago, but was lost and hence never printed. The discoveries include: (1) a *villa rustica* in Civit  Giuliana (Comune di Boscoreale) excavated in 1903. With two others previously found and described this villa was on a public road passing out of the Vesuvian Gate and continuing the Via Stabiana; one side of the building was curved to conform to the course of the road. Near by, on the same road, was a sepulchral monument with two entrances, one opening on the road, the other on the campagna. Various objects in iron, bronze and terra-cotta were found, and a fine marble table in *fior di persico*, standing on a single leg composed of a herm, of which the head was rosso antico, the foot giallo antico, and the trunk African marble. The monument, which was 3.30 m. wide and 5.45 m. high, probably belonged to the villa. There were also found two portrait busts in travertine, roughly finished because of the high position for which they were intended. Another *villa rustica* (2), excavated in 1904 in the same Comune di Boscoreale, was without adornment and evidently occupied only by *vilici*. In connection with it there were found various objects in iron, bronze, glass and terra-cotta. In previous excavations in the neighborhood a fine bronze strainer was found with the name of the maker, *Felicio*, on the handle. Still another *villa rustica* (3) was found in the district called Pisanella in the same Comune in 1903-04. This villa, which was spacious, commodious, and rich in mural decoration, was obviously intended as a residence. It had a view of the gulf and an abundance of sun. There were two entrances with quarters for *ostiarii*, an exedra devoted to Venus Pompeiana and a *Lararium*. There were no *torcularia* or *trapeta* and no *pistrinum*, these doubtless being grouped in some neighboring building. The

villa had been rifled in antiquity and in modern times. A seal which was previously discovered in a *cella ostiaria* gave the name of the owner, *Asellius*, and of his procurator, *Thallus*. Yet another *villa rustica* (4) was found south of the piazzale of the railway station at Boscoreale, and evidently belonged to a family of farmers. It consisted of two groups of modest structures, separated by a passage practicable for carts and ending in two entrances, on the street and on the campagna. Among the discoveries is a fine vase, unique in its form in the *instrumentum domesticum* of Pompeii. It is round, 26 cm. in diameter, and consists of a tube of circular section 45 mm. in diameter. The two sides are joined by a plain handle of cylindrical form flattened and compressed at the edges, which rises to the height of a cylindrical opening 3 cm. in height. On the handle opposite the neck are the remains of a nail, by which the vase was hung up. The vase was ornamented before baking with a garland of berries and lance-shaped leaves, consisting of two branches of six berries and twelve leaves, converging near the opening. Various other objects were found, especially a group of seven images of deities from 13 to 8 cm. in height and including Jupiter, Isis, the Genius of the Family, Neptune, Helios and a Faun. (5) The fifth villa was a fine *rustica*, belonging to N. Popidius Florus. It was discovered at Pisanella in 1906, a few metres distant from the Ferrovia Circumvesuviana and 100 m. east of the villa Pulzella. One of the rooms had decorations in the Second Style, others in later styles, especially the Fourth. Votive inscriptions to Iuppiter Optimus Maximus and Venus, Liber and Hercules were found; the last three were the tutelary triad of the wine-bearing Vesuvian campagna. One room with decorations of the Third Style had a picture of a cynic philosopher conversing with his *hetaera*. In the *caldarium* of the baths was a mosaic representing an aquarium with a murena, a mullet, a crab, and other sea animals. Other paintings represented writing implements and an *arcula* with two coins and a purse beside it. (6) The sixth *villa rustica* was also excavated at Pisanella in 1906-8. Since it had been pillaged in ancient and in modern times, only the eastern part was uncovered. There were wall decorations in the Third Style and a picture of Bacchus pouring wine from a bowl into the jaws of a rampant panther. One inscription consisted of the alphabet, with several inversions, and another gave the new name *M. Bacculeius*.

POPULONIA.—Recent Discoveries.—In *Not. Scav.* XVIII, 1921, pp. 301-336, A. MINTO describes excavations by a company which is engaged in working the old iron mines of Populonia. The company began its excavations on the hill of Porcereccchia, carrying off all the scoriae which formed the summit of the hill. In the centre of the field of excavation the remains of a chambered tomb with a mound were found, and in the same area the remains of another chambered tomb, better preserved and with remains of sepulchral furniture. This was similar to those previously found (*Not. Scav.* 1903, p. 10 and 1908, p. 203), but smaller. It had a cella in the centre with three graves, two on each side of the *dromos* and a third at right angles to it. The finds, which were scanty, point to the period of oriental influence. Excavations at the farm of S. Carbone gave few results, remains of graves of the orientalizing and Attic Greek periods, successively destroyed by ancient accumulations of scoriae, some handsome fragments of vases (one black-figured, several red-figured) and a fine mirror 32 cm. in length. Also at S. Carbone, in the course of excavations

for an electric plant for the Società Populonia remnants of ancient buildings were found, and an old well 10 m. in depth with a cylindrical puteal of sandstone, 60 cm. in diameter. Tombs were also found with glass vases, belonging to a *sepulcretum*. One chamber-tomb was completely excavated and its plan is given. Various objects were found: an iron sword and lance head, a bronze candelabrum, a strigil, an eight-pointed hook, and vessels of the same material. A second tomb yielded fragments of painted vases in black figure and red figure of the severe style. A fragment of a black-figured cylix showed the so-called "eyes" with a Silenus between them, and on each side of the handle a dancing maenad; inside is a *gorgoneion*. On a red-figured vase of severe style is a satyr; the work suggests that of Brygos. Part of the metal covering of a wheeled car or chariot was also brought to light. The hill Porcherecchia yielded tombs and various objects in bronze, terra-cotta, and iron: a proto-Corinthian helmet, vases, an antefix with a lion's head, and two inscriptions, one with the personal name *Ferrarius*. There was also a carnelian scarab on which were depicted two men making arms. The government excavations (A. MINTO, *Ibid.* XVIII, 1921, pp. 197-215), which had been interrupted since 1915, were renewed in the spring of 1920. They resulted in determining the extent and duration of the great archaic necropolis which had been found on the southern slope of the hill called Granate. It contained tombs for inhumation and for cremation in the same area without distinction, some of the former being chamber tombs of an unusual circular form. The greater number of the tombs had been opened and rifled, but some yielded bronze objects, including a magnificent ornament for a belt, 40 by 11 cm., decorated with graffiti and reliefs; also fibulae, bells, rings, razors, etc. Some objects in gold, amber and terra-cotta were also found.

PREGGIO.—An Etruscan Structure.—In *Not. Scav.* XIX, 1922, pp. 106-110, AMERIGO CONTINI describes the unearthing of an Etruscan structure of rectangular form at Preggio, in the province of Perugia, 5.85 by 3.22 m., made of rectangular blocks of stone perfectly finished and without mortar. With the cornice which crowns them the walls are 1.83 m. in height. The hypogaeum belongs to the Etrusco-Roman period and resembles the tomb of Bettina. A few fragments of pottery were found.

ROME.—The Temple of Jupiter Optimus Maximus.—In *Not. Scav.* XVIII, 1921, pp. 38-49, R. PARIBENI gives an account of excavations on the site of the temple of *Iuppiter Optimus Maximus*. These were undertaken for the purpose of determining the dimensions of the substructure of the temple and their state of preservation, and, perhaps, recovering architectural and decorative fragments. They were limited by the necessity of not interfering with the modern buildings on the site. The former object was attained; three corners of the substructure were found and the fourth was located, thus making it possible to determine the extent of the substructure. The best preserved corner was that at the southeast, consisting of nineteen tiers of tufa blocks of no great size, without mortar, rising to a height of 6.20 m. It was found that none of the modern calculations were so exact as the measurements given by Dionysius of Halicarnassus, who of course measured at the height of the podium. His measurements are calculated to be equivalent to 61.42 by 56.98 m., and the actual dimensions as 60 by 55 m., disregarding decimals. A correction is also made in the orientation of the temple, which varied 27° from a

north-south direction, instead of 21°. The substructures of a public building or small temple were also found, but could not be identified. The hope of finding architectural fragments was not realized.

A New Fragment of the Inscriptions of the Arval Brethren.—In *Not. Scav.* XVIII, 1921, pp. 49-51, G. BENDINELLI publishes a small fragment in Luna marble, 20.3 by 14.2 cm. from the inscriptions of the Arval brethren. There is little hope of supplying the missing text. Of the consuls only the name *Crasso* remains, which by a process of elimination, and on palaeographic grounds, is referred to the consul of 27 A.D.

Miscellaneous Discoveries.—G. BENDINELLI (*Not. Scav.* XVIII, 1921, pp. 52-54) reports the discovery of a bronze vase with a votive inscription to Hercules Invictus, found in the Tiber; of tombs of late imperial times under the Via Flaminia; and tombs, foundation walls and an inscription on the Via Tiburtina.

A Jewish Inscription.—In *Not. Scav.* XVIII, 1921, pp. 358-60, R. PARIBENI notes the discovery in the Jewish cemetery of Monteverde on the Via Portuense of a fragment of an inscription in Latin 31 by 32 cm. It has on it the seven-branched candle-stick, a horn and palm branch and the Hebrew formula *be salom=in pace*. Although not later than the beginning of the Middle Ages, it contains the German name Sigismundus.

The Monument of the Aurelii.—In *Not. Scav.* XVIII, 1921, pp. 230-234, G. BENDINELLI reports new discoveries in the sepulchral monument of the Aurelii on the Viale Manzoni (*Not. Scav.* 1920, pp. 123 ff.). A third sepulchral chamber was found, originally not subterranean but rising to a considerable height above the level of the street; it has an entrance on the north, which is wholly preserved. Immediately beyond the entrance is the opening of a large light-shaft, which must have been covered with a grating. The chamber fell in ruin in ancient times and was levelled nearly to the ground a few centuries ago; for the most part only the outside walls, which are 80 cm. in thickness, were retained as the support of a modern building, which has recently been demolished. Interesting remains of paintings are preserved. On the side of each *arcosolium* are figures of men, half life size, bearded and dressed in white tunics with red *clavi* and white cloaks; their feet are bare. The figures are seated and so placed as to face the corresponding figure on the same wall, on the other side of the *arcosolium*. In the best preserved group, which is on the left-hand wall, it can be made out that the right hand was raised to the breast and that both hands were engaged in unrolling a scroll. The man is seated in a rather flat arch or doorway, next to which is a one-storied building extending to the summit of the *arcosolium*; it has the form of a peripteral temple, sketchily represented, with ten Doric columns on each side. On the opposite side of the *arcosolium* appears the same arrangement reversed, but the roll and the right hand are raised and the index and middle fingers are spread apart in the attitude of one giving instruction. On the opposite wall is a corresponding decoration, arranged as if the former were reflected in a mirror. The paintings on the wall opposite the entrance, which is without an *arcosolium*, are even less well preserved. They show a youthful nude standing figure from the head to the hips. The attitude suggests a woman, but the sex cannot be definitely determined. To the right of this figure is another standing figure, of which nothing remains but the left leg between the foot and the knee. Near the leg is a small serpent. Opposite these figures are the head and a few traces of the

rest of a seated figure, like those on each side of the *arcosolium*, and behind the figure some branches of a flowering shrub. A short distance to the right is the bust of a male figure, of reduced size, in red, standing at the foot of a tree with a tall trunk, many branches, broad leaves, and fruit of large size, resembling pomegranates. No objects or inscriptions were found in the latest excavations except a stamped tile of Domitia Lucilla, 137 A.D., and a few others, all of which have the inscription given in *C.I.L.* XV, 1, 408 d, of the time of Caracalla.

A Marble Cippus.—In *Not. Scav.* XIX, 1922, pp. 81-87, O. MARRUCHI publishes a marble cippus in the shape of an altar, having a Greek inscription and reliefs relating to the cult of Magna Mater. It was found in the palazzo called dei Convertendi in Borgo Pio, near the Piazza of S. Pietro in Vaticano, at a depth of 3 m. below the level of the street. The lower part is missing, but when entire it must have been about a metre in height. The inscription, which is on the front, is difficult to decipher. It appears to dedicate the monument to a certain Pamphilus, who had made three pilgrimages to Phrygia. On the right side is depicted a pine tree, from the branches of which hang a tambourine and a syrinx. Leaning against the tree is a double tibia and to its right is a shepherd's staff. In front of the tree was the sacred bull, of which only the head and a part of the neck remain. On the left side is another sacred pine, from which are suspended cymbals and a Phrygian cap. Below are a syrinx and the sacred ram, of which only the head is left. At the back are the ewer and patera, a shepherd's crook, and two crossed torches. The *Notitia* and *Curiosum* mention a Phrygianum in the locality where the cippus was found.

Discoveries on the Via Casilina.—In *Not. Scav.* XIX, 1922, pp. 137-144, G. MANCINI reports various discoveries; on the Via Casilina (ancient Labicana) beyond the line of the Claudian aqueduct, in the former vineyard of S. Marcello, walls 1.18 m. in thickness, belonging to the amphitheatre of the *Horti Variani*, later transformed into the park of S. Varius Marcellus, father of Heliogabalus, and also called *Horti Spei Veteris*. Excavations will make it possible to give a plan of the building and to determine whether the obelisk set up by Pius VII on the Pincio belonged to the *Circus Varianus* or to the cenotaph of Antinous. In the district called Marranella on the left of the Via Casilina, in front of the railway station near Tor Pignattara, a sarcophagus of Luna marble was found, 2.42 by .98 by 1.10 m., with sculptures on the front only. These represent a foundation of waves in which dolphins swim, and above four marine centaurs, two middle-aged and two youthful, each with a nude Nereid on his back. The composition and execution are good and the arrangement of the hair of the Nereids suggests the last quarter of the second century. In the same place fragments of other sarcophagi were found and five inscriptions; also a marble funereal cippus with sculptures. Three kilometres from the Via Casilina, near the mausoleum of S. Helena a Tor Pignattara and the cemetery of SS. Marcellino e Pietro, at a depth of one metre, portions of a wall of late date were found, and fragments of inscriptions belonging to a *sepulcretum* of the *equites singulares, ad duas lauros* or *inter duas lauros* (Tert. *Apol.* 35). Sixteen fragmentary inscriptions are published. On the Via Praenestina, between Tor de' Schiavi and Tor Tre Teste, in a place known as Pedica di Tor Tre Teste, remains of a sepulchral monument were found, with the inscription of a *purpurarius de vico Iugario*.

SAN BIASE AND GIZZERIA.—Terium.—In *Not. Scav.* XVIII, 1921, pp. 470-473, P. Orsi tells of his search for the site of ancient Terium. It was located by Lenormant near S. Eufemia Vecchia, a place which because of malaria was abandoned more than a century ago. Pais, with some hesitation, put it at Tirioli. Here in 1865 was found the celebrated treasure, wrongly called that of Agathocles. Various discoveries and several considerations lead Orsi to place the site of the town on the terrace called Elemosina, washed on the east by the river Bagni; absolute proof, however, is lacking. The baths of S. Biase, situated where the river emerges from the pass through the mountains, he identifies with Aquae Angae. The topography of the region during twenty centuries has been greatly altered by the river Bagni.

SANDRIGO.—A Barbarian Necropolis.—In *Not. Scav.* XVIII, 1921, pp. 291-92, A. ALFONSI reports the discovery at Sandrigo (Prov. di Vicenza) of a barbarian necropolis containing eleven skeletons at a depth of 60 to 70 cm. in the alluvial soil of the Astico brook; also iron implements and bronze ornaments. The tomb was, perhaps, Lombardic.

SANTA MARIA DI CAPUA VETERE.—A List of Magistri.—In *Not. Scav.* XVIII, 1921, pp. 62-65, S. AURIGEMMA announces the discovery of an inscription in the district of S. Leucio, near Santa Maria di Capua. The inscription, which from the form of the names and on palaeographic grounds is assigned to the republican period, is on two pieces of a slab of calcareous stone 82 cm. wide and 60 cm. high, and is incomplete. It forms part of a list of one of the colleges of twelve *magistri*, elected annually in the territory of Capua to take charge of the single sanctuaries in one of the districts formed after the taking of Capua by the Romans in 211 B.C. Six names are preserved in one column and fragments of two in another. There is no indication of the *pagus* or of the *fanum* concerned. The inscription records the celebration of games by the *magistri* and the addition to the theatre of *treib. cuniu. muliereb.*, which Aurigemma is inclined to interpret as a tribunal, a *cuneum*, and a place for women (*muliebria*), comparing Suet. *Aug.* 44 and *C.I.L.* XI, 4206. At 13 Via Albana there was found a sepulchral inscription belonging to the first or second century of our era. (A. AURIGEMMA, *Not. Scav.* XIX, 1922, p. 145.)

SARDINIA.—The Catacombs of S. Antioco.—In *Not. Scav.* XVIII, 1921, pp. 142-176, A. TARAMELLI gives an account of the exploration and putting in order of the catacombs of S. Antioco at ancient Sulci, which are of special importance because of the few Christian remains in Sardinia. It was found that they were not constructed according to the usual regular plan, with *decumanus* and *cardines*, but by joining by means of entrances and galleries at least four great Punic *hypogaea*, each consisting of a chamber of rectangular form divided by a half-wall in the middle. Among the finds was a fragment of a marble slab with a relief which apparently represents a player on bagpipes; it belongs to the late Byzantine period. There were also the remains of some interesting paintings, two fine glass bottles, 39 and 35 cm. in height, of a form common in Sardinia, but undoubtedly Roman, some lamps, and a few inscriptions. The catacombs seem to have been begun in the second century, altered in the third, and to have continued in use to a period between the six and the eighth centuries.

SCABDICCI.—A Bronze Instrument.—In *Not. Scav.* XIX, 1922, pp. 103-05, E. GATTI describes and illustrates a curious instrument of bronze dis-

covered at Scabdicci, near Florence. It consists of a combination of tweezers and a probe, to the side of which is attached a small saucer. He regards it as a surgical instrument, belonging to the second or third century. R. ALESSANDRI, who adds a note, thinks that it was probably used in connection with a lamp.

SORRENTO.—Recent Discoveries.—In the district of Sorrento called Parzano, tombs were found with inscriptions of a good period, and part of a marble statue of a boy; also tombs at Nocera Inferiore. (A. AURIGEMMA, *Not. Scav.* XIX, 1922, pp. 145-146.)

SPEZZANO ALBANESE.—Necropolis of Torre Mordillo.—In *Not. Scav.* XVIII, 1921, pp. 468-469, P. ORSI tells of his transportation of antiquities found at Spezzano Albanese, which are important for the study of the prehistoric civilization of Calabria in the so-called first age of iron, from Cosenza to the museum at Syracuse and their arrangement there. As a preliminary to an appendix to Angelo Pasqui's publication, he gives a list of places in the valley of Crati where antiquities of the Torre Mordillo type have been found.

TALANA (CALIGARI).—A Hoard of Imperial Coins.—In *Not. Scav.* XVIII, 1921, pp. 499-500, A. FARAMELLI reports the discovery of a hoard of imperial Roman bronze coins at "sa Sogargia" at Talana. The coins, about 700 in number, were found by a laborer in a hole in the ground, but not in a receptacle of any kind. The greater number were, therefore, in bad condition; about forty, belonging to the second century, were barely legible, and thirty others, evidently of a later date, could not be identified with certainty. Those which could be classified, about six hundred in number, represented no less than thirty emperors and empresses, from Hadrian to Salonina, and 145 different types.

TORTONA.—Ancient Blanda.—In *Not. Scav.* XVIII, 1921, pp. 467-468, P. ORSI tells of the exploration of the site of ancient Blanda in Lucania, which had already been conjectured to be on a hill called Pijarello on the road from Praja di Ajeta to Tortona. Orsi discovered some remains on another hill of moderate height, belonging to an ancient dwelling surrounded by a wall. The wall, which is in part well preserved and partly broken, contains two small semicircular towers. Orsi thinks that the site should be excavated. Mommsen gives three inscriptions from the locality; Orsi saw one of them and furnishes a corrected reading.

TRANSPADANA.—Miscellaneous Discoveries.—In *Not. Scav.* XIX, 1922, pp. 97-103, PIETRO BAROCELLI reports various discoveries in the Transpadine region: at Curreggio, near the railway station, a hoard of Roman imperial coins, middle and small bronzes, of which 1008 fell into the hands of the authorities. The coins had been much used and not all of them could be identified. At Moncrivello (Vercelli), an inhumation tomb of the Roman period, with a small vase of common terra-cotta. At Caravino (Ivrea), a hoard of Roman money of the third century, mostly of Gallienus and Claudius II. At Aosta, an aqueduct. At Rodallo Canavese, a tomb of the Roman period with a brickstamp belonging to a local potter (cf. *C.I.L.* V, p. 977). At Caluso a tomb of uncertain date with pottery. At Viù prehistoric stone implements, parts of two axes and a sword-blade. At Moncalieri a tomb of the Roman period with a fragment of an inscribed tile.

VENAFRO.—Imperial Statues and Decorative Sculpture.—In *Boll. Arte*,

II, 1922, pp. 58-75 (13 figs.), S. AURIGEMMA publishes the recent finds at Venafro, in the region popularly known as the "Terme di S. Aniello." The most important objects are two statues, above life size, one giving a realistic representation of Augustus, the other, of Tiberius. Aside from the heads, the statues are almost identical, having the same pose and the same arrangement of drapery. Three smaller statues of a youth and satyrs, apparently decorative in purpose, were found, and also some details of architectural decoration.

VERONA.—A Roman Pavement.—In *Not. Scav.* XVIII, 1921, pp. 296-297, A. DA LISCA reports the discovery of a Roman pavement near SS. Apostoli, 4 m. by 3.60. It was bounded by a wall on the east side, one metre high, with three layers of stucco on the inside, painted in yellow and red squares separated by white lines. The building belonged to the second, or, perhaps, the first, century of our era. There were indications that it had been destroyed by fire, perhaps by the Hungarians in the tenth century.

VULCI.—Excavations on the Acropolis.—Explorations in 1919 yielded tombs, which had been rifled in ancient times. In one were found the remains of vases and a bracelet of thick copper wire. The existence of two cemeteries was indicated, belonging to the period from the second half of the seventh to the first half of the sixth century B.C. Another tomb yielded a fragmentary bust of a male figure in the local archaic style. The nose, lips and chin are broken. The forehead is very low, the eyes large and staring; the face is bearded and the hair is peculiarly arranged in two long ringlets falling upon the shoulders. At the back of the head the hair is peculiarly arranged in a series of broad strands on top of the head with three large horizontal parallel bands beneath them, succeeded by a line of ringlets which represent the ends of the hair. The arms, which are both broken off at the shoulder, descended stiffly by the sides. The torso is exaggeratedly short and narrow; the line of the backbone is indicated. This fragment fits the torso of a quadruped and evidently formed part of a centaur. A part of a sculptural group was also found, consisting of a youthful male figure with long hair falling upon the shoulders, mounted upon a serpent-like monster ending in a fish's tail; the fragment, 85 cm. in height, is of the most archaic Etruscan workmanship. It seems to have belonged to the ornamentation of a tomb in the open air. There were also fragments of pottery and some whole vases of small size. About twenty tombs were found in a group, but they had been opened and rifled. Some discoveries were made also at Fontanile di Vulci, within the area of the city, in the form of large blocks of peperino, one of which bore the upper part of a hippocampus in low relief; the rest of the figure was probably on another block. In the court of the old castle at the Ponte della Badia, above the architrave of a gate, is a sculptured frieze, which seems never to have been noted or published. A warrior with chiton and lorica has fallen upon his right side and leg and is raising himself by putting his hand to the ground, while with the left hand he lifts a round, hollow shield. Close behind him at the left is a fantastic winged figure, human to the hips but ending in a serpent. In the right hand this monster holds an oar-shaped implement, with which it seems to intend to strike the warrior, whom it is raising by placing its left hand behind his back. The group seems to represent an infernal *genius* of the Scylla type, on the point of taking possession of a mortally wounded warrior. An inscription was found with the name of L. Cocceius,

also an antefix, 25 by 22 cm., of a fine Hellenistic type and of an original form. It represents a woman's head with a *torques* about the neck. The face was originally colored white, the pupils red, the hair a dark chestnut. (G. BENDINELLI, *Not. Scav.* XVIII, 1921, pp. 342-356.)

SPAIN

SEVILLE.—**A Terra-cotta Antefix.**—A terra-cotta antefix found at Italica, seven kilometres northwest of Seville, is now in a private collection in that city. On it is represented the so-called Oriental Artemis, here without wings, and wearing a chiton with a girdle over the apotygmata. The goddess holds by the fore paws an animal on either side. The animals are so rudely and vaguely modelled that it is uncertain whether they are panthers or dogs. In Italy it is evident that representations of the Oriental Artemis are not always definitely associated with cults of Diana. In Spain the use of such an antefix is probably merely decorative without relation to any special cult. Antefixes which show the Oriental Artemis may be classified as follows: (1) a well-marked archaic Ionic type, with a dress like that of the Maidens of the Acropolis, and with curved wings; the animals raised from the ground; vivid polychromy; (2) an advanced archaic type, with the Dorian chiton and straight wings; the head wears a polos; the animals stand on the ground, and are held by one paw; (3) a late archaic or archaizing type, with a less stiff costume and somewhat elaborate ornament of Roman style. The example from Italica is of the second class; but its actual date is probably not earlier than the first years of the Empire. Its rudeness shows that it is of local workmanship, in imitation of a traditional Italian form which was itself derived from a form in which Greek influence was still perceptible. (A. LAUMONIER, *R. Ét. Anc.* XXIII, 1921, pp. 273-280; 5 figs.)

FRANCE

BAYONNE.—**A Basque Museum.**—In *R. Ét. Anc.* XXIV, 1922, p. 334, G. RADET announces that the creation of a Musée Basque at Bayonne has been definitely decided upon. The Société des Sciences, Lettres, Arts et d'Études régionales, which is in charge of the establishment of the new museum, expects to gather a collection of utensils, furniture, pottery, textiles, inscriptions, coins, armor, grave monuments, portraits and other objects illustrating the arts of the Basque region in the past, and also examples of the products of its modern industries, great and small.

MARTRES DE-VEYRE.—**A Gallo-Roman Cemetery.**—A. AUDOLLENT reports the discovery of a number of Gallo-Roman burials at Martres-de-Veyre (Puy-de-Dôme), in an area which was strongly impregnated with carbonic acid gas, accounting in great measure for the unusual preservation of the objects found. Inhumation burials with fragments of clothing were discovered, and also funerary urns with remains of incineration burials. The cemetery was one of families of modest position, and no objects of great value were found in the graves. (*C. R. Acad. Insc.* 1922, pp. 260-264.)

HOLLAND

NYMEGEN.—**Recent Discoveries.**—In *R. Ét. Anc.* XXIV, 1922, p. 320, F. CUMONT gives a brief account of the results of M. Holwerda's studies on

the site of the Oppidum Batavorum at Nymegen, based on the report in the *Oudheidkundige Mededeelingen* of the Leyden Museum, II, 1922. The summit of the hill on which the fortress stood was surrounded by a circuit wall, which was pierced by gates at the north and south. The two gates were connected by a paved road, near which huts of rectangular, round or oval plan were built. The rest of the area seems to have served as a place of refuge in danger for the surrounding population. M. Holwerda has also continued his investigation of the neighboring camp of the Tenth Legion, and has uncovered part of the western fosse, the east gate, and remains of the praetorium.

GERMANY

BERLIN.—*The New Installation of the Cast Collection.*—The famous collection of casts of ancient sculpture belonging to the Berlin Museums has recently (1916–1921) been transferred to the upper story of a new west wing of the University building, in accordance with a wish of the late Georg Loeschcke that it should be in close touch with the archaeological seminar. In the course of the removal the 2500 pieces were cleaned by a compressed air process and sprayed with a thin coating of a slightly tinted, moisture-proof preparation of gun-cotton. They are now arranged against walls of a variety of deep colors, in a suite of eight large rooms (150 m. long) lighted by a clearstory, and a row of smaller galleries or cabinets on either side. Here the Greek development of the representation of the human figure, clothed and unclothed, singly and in pairs or groups, free-standing and in relief, detached and in the architectural limitations of metope, frieze and pediment, is displayed in chronological order, the series of great pediments beginning with the only cast in existence of the Gorgon group at Corfu. In the cabinets the earlier art of the seventh and sixth centuries B.C. is shown, together with archaic work of later times and statues, friezes, votive and grave reliefs, caricatures, figures of children and of animals, all grouped so as to give each room a certain unity. The southernmost rooms, in the corner adjoining the main building, are devoted to Hellenistic and Pergamene art and the Graeco-Roman art of the time of Augustus and of Trajan and Hadrian, while at the other end of the wing are the rooms for Cretan and Mycenaean art, including frescoes and metal work. The collection is open free to the public three days in the week and is used by schools and private classes as well as for the regular academic purposes. (F. NOACK, *Arch. Anz.* 1921, cols. 15–34; 11 figs.)

HILDESHEIM.—*A Serapis Relief.*—In the Pelizaeus Museum at Hildesheim is a fragment, a little more than a quarter in segment form, of a round limestone relief (diam. 19 cm.) which shows Serapis enthroned, with his right hand resting on the head of Cerberus, and two goddesses, of whom only the upper parts are preserved, standing on his right and left hand and characterized as Demeter and Isis. The relief is discussed by A. IPPEL, who shows that the god was already worshipped in Egypt in the time of Alexander and compares the famous journey of the statue of Dis from Sinope to Alexandria in accordance with King Ptolemy's dream, with the bringing of the Epidaurian Aesculapius to Rome, not to introduce a new cult but to give prestige to a new and more splendid temple. The establishing of divinities from Cyprus as patrons of newly founded Antioch was a similar device for linking new and old. The double form of the female companion of the god is a recognition of

the dual character of the Graeco-Egyptian city of Alexandria. If the figures of the goddesses on the plaque were restored to the level of the ground, about one fourth of the diameter would remain below their feet, which suggests that they were represented standing on a ship. This favorite Egyptian scheme may even have been carried out in the group of statues from which presumably the relief was copied. (*Arch. Anz.* 1921, cols. 1-11; fig.)

GREAT BRITAIN

CARDIFF.—The Roman City.—Further investigation of the Roman remains at Cardiff is reported by R. E. M. WHEELER (*Ant. J.* II, 1922, pp. 361-370; 6 figs.). Discoveries in 1889 proved the existence on this site of a quadrangular enclosure with gates on the north and south sides, and with semi-octagonal bastions along the walls. It was a part of a chain of defenses established in the reigns of Diocletian and Constantine I. Since their discovery the walls have been in part restored by the Marquis of Bute. It has been shown that the western curtain wall, which is largely of mediaeval date, follows the line of the Roman wall. Another bastion of the south wall has been discovered. The position of the foundations of the bastion and wall is not always in alignment with the walls themselves. It is possible that these foundations belong to an earlier fort, or to an unfinished fort which was afterwards remodelled. Pottery discovered on the site indicates its occupation in the first century. Of twenty coins discovered six are of Vespasian or earlier. It appears, then, that Cardiff was a military post in the first century. It is not certain whether it was occupied in the second century. In the third the defenses were rebuilt, apparently in the form of a fort with rounded corners and without bastions. The foundations were afterwards adapted to the somewhat different plan evident in the existing walls.

DEVON.—Hallstatt Pottery.—W. BRIDGES reports and R. A. SMITH comments on the discovery at Eastbourne in Devonshire of fragments of pottery which was apparently imperfect and, therefore, abandoned near the place of manufacture. In shape, color, and decoration they belong to the Hallstatt culture. Local painted pottery is unknown before the Roman period. These pots must have been made by an immigrant belonging to the Hallstatt people. It is possible that the Hallstatt invaders were the first Celtic-speaking people of the British Isles. (*Ant. J.* II, 1922, pp. 354-360; 5 figs.)

HERTFORDSHIRE.—Roman Remains.—In the levelling of a tennis-court at Great Berkhamstead in Hertfordshire a number of relics of Roman occupation were discovered, including coins of Constantine and Carausius, fragments of roof tiles, and sherds of Red Gaulish ware, of common buff and black pottery, and of a finer ware approximating the Castor type. (*Ant. J.* II, 1922, pp. 379-380.)

NORTHAMPTONSHIRE.—Objects of the Neolithic and Bronze Ages.—The investigations of Mr. G. W. Abbott at Peterborough, first reported in 1910 (*Archaeologia* LXII, pp. 352 ff.) have been continued and the numerous fragments of pottery he has collected are the subject of description and classification by E. T. LEEDS (*Ant. J.* II, 1922, pp. 220-236; 15 figs.). The site was occupied continuously from late Neolithic to late Celtic times; but Mr. Leeds' study is confined to objects of the Neolithic and early Bronze ages.

NORTHUMBERLAND.—Pygmy Industry.—It is reported on the authority

of Francis Buckley that Basalt Crags near Bamburgh and Craster in North-umberland have yielded evidence of the manufacture of pygmies on the North-umberland coast, probably by a migratory population. (*Ant. J. II*, 1922, pp. 376-377.)

SOMERSET.—Roman Remains.—Six stone coffins of Roman date have recently been found in Somerset: one at Preston, southwest of Bath, one at Medford, two at Keynsham, one at Bath, and one at Burnett near Keynsham. In a field near the site of the two Keynsham coffins are the foundations of a Roman house and a thick layer of roofing tiles. The present Keynsham cemetery is on the site of an ancient villa. Fragments of foundation walls and mosaic pavements have been brought to light here. (*Ant. J. II*, 1922, pp. 380-381.)

Roman Coffins.—In *Ant. J. II*, 1922, pp. 371-375 (2 figs.), H. Sr. GEORGE GRAY reports the discovery at Keynsham Hams, Somerset, of two Roman coffins of oolite (Bath stone). The place of discovery is about 400 feet west of the Avon, and three quarters of a mile south of the Roman road from Bath to Avonmouth. In one of the coffins is a leaden shell or lining, somewhat shorter than the coffin. No relics were found with the skeletons in these coffins, but they are unmistakably of the Roman period. Near them were found coins of Gordianus Pius and Constantius II. Mr. Gray reviews the discovery of other Roman coffins in England. The enclosure of a leaden coffin within a stone one is so far unique.

Discoveries at Hams Hill.—Dr. F. WALTER has reported the discovery of numerous small antiquities at Hams Hill in South Somerset, ranging in date from the late Stone Age to the Roman occupation of Britain, and including small objects of bronze and iron, fragments of "Samian" ware, and Late Celtic and British pottery. (*Ant. J. II*, 1922, pp. 381-382.)

SUSSEX.—The Cissbury Earthworks.—In *Ant. J. II*, 1922, pp. 377-378 (plan) it is reported that Mr. H. Toms has contributed to the *Sussex County Herald* of June 28 and July 8, 1922, an article on the old camp at Cissbury, which, in spite of its curious shape, he believes to be of Roman construction.

WILTSHIRE.—A Cinerary Urn.—A cinerary urn of the Bronze Age has been discovered near Marlborough, and is in the Museum of the Wiltshire Archaeological Society at Devizes. It belongs to Abercromby's Type I of tripartite vases. The rim is ornamented with a lattice pattern, the shoulder with a herring-bone pattern. (*Ant. J. II*, 1922, p. 378.)

Pits of the Iron Age.—Mr. and Mrs. B. H. Cunningham have investigated a number of pits of the Pre-Roman Iron Age on the site of Battlesbury Camp in Wiltshire. The finds include sling bullets of baked clay, and various objects of iron, stone, and bronze. Especially interesting is an iron saw-blade with teeth sloping towards the handle, as in most prehistoric saws. (*Ant. J. II*, 1922, pp. 338-339.)

NORTHERN AFRICA

BULLA REGIA.—Recent Discoveries.—Dr. L. CARTON has reported briefly on recent excavations at Bulla Regia (*C. R. Acad. Insc.* 1922, pp. 172-175). Along the street leading to the street of the *thermae* a great group of buildings, 30 meters long, has been brought to light. Two great basements, resting on moulded plinths, are separated by a passage which forms a gate to

the street. They supported a colonnade. The whole façade of the great baths has been uncovered. It is 60 metres long, and has the form of a portico of arches. On the west side of the baths is a great hall, 40 by 6.50 metres in dimensions, and formed of eight vaults. The outside wall supported a colonnade opening to the west. It has been discovered that over the curious polygonal basement east of the *thermae* was a hall of the same shape, with four doors. Probably the altar of Diana found in the basement had fallen from the upper room, which may have been a small sanctuary dedicated to that divinity. In the quarter of subterranean apartments a street has been found adjacent to the room called that "of the Hunt." Its situation indicates the existence of a whole group of subterranean rooms. Apparently all the houses in this region have basement rooms, important in their variety of interesting details—mosaics, frescoes, columns, fountains, etc. North of the *Nymphaeum* Dr. Carton has continued the excavation of a church, of which the presbyterium was already known. Near this is a small bath establishment, remarkably well preserved. It included a fountain for cold water, with a tub; two *sudaria* over hypocausts, with floral mosaics, three fine baths with mosaics, under each of which there is a hypocaust and furnace. The pipes for heating and for water are still in good condition. It has been found that the street of the temple of Apollo is continued by a paved road leading to the site of the triumphal arch which MM. Cagnat and Saladin described in their *Tour du Monde* (1885), but which has since been entirely demolished.

CARTHAGE.—The Need of Systematic Excavation.—In *The Living Age*, CCCXVI, 1923, Jan. 6, p. 59, is an abstract of a letter from Dr. L. CARTON to the *Écho de Paris*, calling attention to the neglect of Carthage as an archaeological site. During Arab occupation little injury was done to ancient remains; but modern contractors are now carrying off stones for the construction of villas, and five independent archaeological parties have been at work on the site. "Their uncoördinated studies show that many a treasure lurks beneath the soil; but unless there is central direction of some kind, the excavations may destroy almost as much as they add to knowledge."

A Sanctuary of Tanit.—At a meeting of the Académie des Inscriptions on August 11, a part of a report by G. L. POINSSOT and R. LANTIER was read, describing the excavation of a sanctuary of Tanit recently found at Carthage (*C. R. Acad. Insc.* 1922, pp. 281–282). Each offering was marked by a votive monument which originally stood above the ground. Beneath was a terracotta urn containing the remains of the sacrifice. Four successive strata were recognized, of which the earliest, at a depth of five metres, belongs to the seventh and sixth centuries B.C. and the latest to the last period of Carthaginian independence. Carbonized wood and fragments of bones were found in the jars; they contained remains of infants and children up to the age of three. Apparently first-born children were offered to Tanit during the whole period of Punic occupation.

Two Stelae.—In *C. R. Acad. Insc.* 1922, pp. 109–111, L. POINSSOT and R. LANTIER report the discovery of two carved stelae in the Punic sanctuary which is near the west bank of the rectangular port, where four strata of ex-votos have recently been discovered. One shows a bird in profile, unmistakably a hawk; the head is surmounted by a *pschent*, and it is apparently the bird of Horus. On the other is represented a standing figure in an attitude

of protection or of adoration, probably a suppliant. The workmanship of these reliefs associates them with the engravings on the axe-shaped razors often found in Punic graves.

A Punic Inscription.—In *C. R. Acad. Insc.* 1922, pp. 112-114, J.-B. CHABOT interprets a Punic inscription on a stele recently discovered in the excavation of a sanctuary by MM. Icard and Gelly at Carthage. It records a dedication to Tanit.

A Christian Basilica.—In *C. R. Acad. Insc.* 1922, pp. 302-307, Père DELATTRE reports excavations at Carthage on a Christian site between the village of Douar-ech-Chott and the station of Salammbô. The discovery of a number of Christian burials and inscriptions led to the finding of architectural fragments and foundations, finally showing that there had stood on this site a basilica thirty-nine metres long, with an orientation similar to that of the Basilica Majorum and the neighboring basilica of St. Monica. More than two hundred epigraphic fragments were found in this excavation.

UNITED STATES

BOSTON.—**A Votive Offering of the Cypselidae.**—In *B. Mus. F. A.* XX, 1922, pp. 65-68 (6 figs.), L. D. C(ASKEY) reports the purchase by the Museum of Fine Arts of a unique ex-voto of the seventh century B.C.—a bowl of gold, inscribed as an offering of the Cypselidae (Fig. 3). It is said to have been found at Olympia, at a point east of the Altis, in the bank of a water-course formed by a winter torrent, between the Stadium and the Alpheus. The bowl is of more nearly pure gold than most gold objects of modern manufacture; but it contains a slight quantity of silver, and shows here and there particles of white metal similar to those which appear in ancient Egyptian gold. It is 16.8 cm. in diameter, and its shape is that of a phiale mesomphalos; but it is unusually deep; and its sides are shaped into nine flutes. A fragmentary libation bowl of bronze, found at Olympia, also had a boss and nine flutes. Aside from the fluting the gold bowl has little ornament. In the interior a line of beading marks the circle of the boss, and the bottom of each flute. The weight of the bowl is very nearly one hundred shekels, or two minae of the light Babylonian standard, from which the monetary system of Corinth was derived. On two of the flutes, just below the rim, is the inscription *κυψελῖδαι ἀνέθεν ἐξ Ἡρακλείας*. The letters seem to have been made with three tools, two which produced long and short straight marks respectively, and a tubular puncheon which made the circle of the *koppa* and the *theta*. The historical event implied in a dedication from Heraclea is not otherwise known. It has been conjectured that the town in question was the Heraclea known to have existed on the Ambracian gulf. The sons of Cypselus founded colonies in this region; and it is possible that in extending and consolidating the power of the Corinthian dynasty on the west coast of Central Greece, they took the town of Heraclea, and made an offering from the spoils to Olympian Zeus.

Miscellaneous Objects.—The Museum of Fine Arts in Boston reports the acquisition of a number of objects of classical art: (1) Four amber ornaments, some small bronzes, and an early Roman bronze coin, all from Palestrina, a part of the Buffum Collection; (2) an Attic red-figured column-crater of severe style showing Dionysus and a silenus on one side and a silenus and a maenad

on the other; (3) a severe red-figured cylix, in the interior of which is a helmeted head of Athena; (4) a fragment of a large vase, on which is the lower part of a draped figure incised in the black glaze. (*B. Mus. F. A. XX*, 1922, p. 74; 3 figs.)

Buddhist Sculptures.—In *B. Mus. F. A. XX*, 1922, pp. 49–53 (13 figs.),

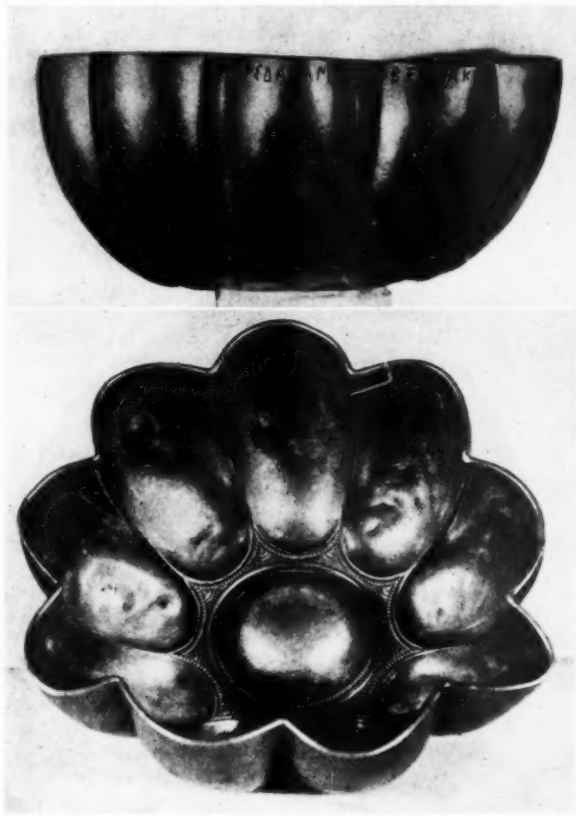


FIGURE 3.—GOLD BOWL OF THE SONS OF CYPSELUS: BOSTON.

ANANDA COOMARASWAMY describes and interprets a series of Indian Buddhist statues, statuary fragments, and reliefs recently acquired from various sources by the Boston Museum of Fine Arts. Twenty-one fragments from Amaravati, ranging in date from 100 B.C. to 200 A.D., were given by the Government Museum at Madras. A series of rectangular plaques or coins, showing in

relief the figure of Maya Devi, the mother of Buddha, belong to the first or second century A.D. The school of Mathura (first to seventh century) is represented by numerous fragments. These include reliefs of the Kushan period, and a large head of Buddha belonging to the Gupta period. A standing copper image of Buddha, said to have been found in Burma, is also assigned to the Gupta period (320-700 A.D.). To the mediaeval period are attributed a black stone image of Padmapani (the Bodhisattva Avalokitesvara), a metal image of Padmapani, of exquisite workmanship, and a remarkably well preserved stone sculpture representing the Eight Great Miracles of Buddha's life. These mediaeval sculptures are not earlier than the ninth century, nor later than the twelfth, and illustrate the art of Maghada and Bengal in the Pala period. Dr. Denman W. Ross has given the Museum a Cambodian head of Buddha, which is tentatively assigned to the ninth century.

Saiva Sculptures.—In *B. Mus. F. A. XX*, 1922, pp. 15-24 (10 figs.), ANANDA COOMARASWAMY describes and interprets a series of Indian sculptures recently acquired for the Museum of Fine Arts, representing deities of the Saiva cults of mediaeval and modern India. The oldest is a stone group in relief from Bundelkhand, representing Siva and Paravati in conversation. The others are bronze images of South Indian origin, ranging in date from the eleventh to the eighteenth century.

Indian Paintings.—A. COOMARASWAMY reports that Dr. Denman W. Ross has given to the Museum of Fine Arts two Rajput paintings. One shows a Saiva ascetic seated beneath a tree, and fanned by two attendants. On the ground sits a yogini or female ascetic. The other, called "The Hour of Cowdust," represents Krishna driving the herds into Brndahar at sundown. The first painting is of the sixteenth, the latter of the eighteenth century. The Museum has acquired a fresco fragment of the sixth or the seventh century from Ajanta, showing the heads of four male figures and a statue of Surya, the sun-god, attributed to the first or second century A.D., the earliest Brahmanical sculpture in the Museum. (*B. Mus. F. A. XX*, 1922, pp. 69-73; 5 figs.)

Jaina Sculpture.—Dr. Denman W. Ross has given to the Museum of Fine Arts in Boston a fragmentary relief of fine quality representing Mahavira, the Indian founder of Jainism. This sculpture was probably found at Bundelkhand in North Central India. It is to be dated in the ninth century. (A. COOMARASWAMY, *B. Mus. F. A. XX*, 1922, p. 53; fig.)

Japanese Prints.—The Oriental collection of the Boston Museum of Fine Arts has been enriched by the gift of six thousand Japanese prints from Mr. William S. Spaulding and Mr. John T. Spaulding. The collection has been formed during the last fifteen years, and contains notable examples of all periods of Japanese color printing. (K. T(OMITA), *B. Mus. F. A. XX*, 1922, pp. 31-35; 12 figs.)

Textiles from Morocco.—In *B. Mus. F. A. XX*, 1922, pp. 36-39 (5 figs.), DENMAN W. ROSS describes a series of textiles which he obtained in Morocco in 1921, and has presented to the Museum of Fine Arts.

NEW YORK.—**Statues of Merneptah.**—In *B. Metr. Mus. XVII*, 1922, pp. 225-234 (4 figs.), H. E. W(INLOCK) reports that by exchange for the unique sarcophagus of Queen Aashait, retained by the Egyptian Government from the finds of the Metropolitan Museum expedition in 1921, the Museum has

acquired two heroic granite statues of Merneptah, the traditional Pharaoh of the Exodus (Fig. 4). These figures were discovered near the eastern door of the Temple at Luxor. The bases, thrones, and backs of the statues are covered with hieroglyphs setting forth the names and dignities of the king.

A Clazomenian Sarcophagus.—In *B. Metr. Mus.* XVII, 1922, pp. 215-216 (2 figs.), G. M. A. R(ichter) describes a Clazomenian sarcophagus which has recently been added to the classical collection of the Metropolitan Museum. Only the decorated rim is preserved. At the head is a battle scene, in the centre of which two warriors contend over a fallen man. To right and left of this group are chariot groups. The objects represented beneath the horses are probably tripods supporting bowls, perhaps prizes in a chariot race. On the sides of the rim of the sarcophagus is the usual guilloche. A centaur is represented above this on each side, and a siren beneath it. At the foot are shown two lions attacking a boar.



FIGURE 4.—HEAD OF MERNEPTAH:
NEW YORK.

A Greek Acroterion.—Among the recent classical accessions of the Metropolitan Museum is a beautiful acroterion from a Greek grave monument of the fourth century B.C. On its carefully finished side it shows a design of scrolls and palmettes rising from a bed of acanthus leaves. On the other side is a sketch for a similar design which was never carried out. The closest parallel to the ornament of this finial is found on the monument of Agathon and Sosicrates (Conze, *Att. Grabr.* No. 1535). (G. M. A. R(ichter), *B. Metr. Mus.* XVII, 1922, pp. 255-256; 2 figs.)

Silver from Olbia.—The Metropolitan Museum of Art has acquired three objects of Hellenistic decorative art in silver, all from Olbia: (1) a circular mirror surrounded by an openwork border of beautiful design, composed of scrolls, palmettes, acanthus leaves, and birds, to be dated in the fourth or the third century B.C.; (2) a bowl of later date, with repoussé ornament representing scrolls and Erotes; (3) a bracelet of heavy double links, with a pendant in the form of a satyr playing a syrinx. (G. M. A. R(ichter), *B. Metr. Mus.* XVII, 1922, pp. 133-135; 3 figs.)

A Bodhisattva from Yun-Kang.—In *B. Metr. Mus.* XVII, 1922, pp. 252-255 (3 figs.), S. C. B. R. describes a statue of the Bodhisattva Avalokitesvara from a rock-cut chapel at Yun-Kang, recently acquired by the Metropolitan Museum. It belongs to the time of the Wei dynasty (386-557 A.D.), the best period of Chinese sculpture.

PROVIDENCE.—A Statuette of the T'ang Period.—L. E. R(owe) reports that the Rhode Island School of Design has purchased a terra-cotta statuette of the T'ang period, representing a Chinese priest. On the centre of his high

cap is represented in relief a downward-flying dove. It is possible that this is a Christian symbol, and that the subject of the work is a Nestorian priest. (*B. R. I. Des.* X, 1922, pp. 23-24; fig.)

TOLEDO.—Assyrian Reliefs.—In *Art in America*, X, 1922, pp. 281-282 (pl.), B. M. GODWIN describes two reliefs from the palace of Sennacherib which have recently been acquired by the Toledo Museum of Art. One is a typical representation of soldiers crossing a stream, the other, of a return from a hunt.

CANADA

TORONTO.—A Greek Glass Vase from China.—A vase of carved glass which was acquired two years ago by the Royal Ontario Museum is published by J. PJOAN in *Burl. Mag.* XLI, 1922, pp. 235-237 (pl.; 3 figs.). The principal decoration on the vase consists of three medallion heads with helmets, evidently the representation of heads of Amazons. The work seems to be Hellenistic, probably Alexandrian. There is good evidence that the vase was found in a Chinese tomb in the province of Honan. When and how it got there is the most interesting point of conjecture.

EARLY CHRISTIAN, BYZANTINE, MEDIAEVAL, AND RENAISSANCE ART

GENERAL AND MISCELLANEOUS

CONSTANTINOPLE.—French Excavations.—In *C. R. Acad. Insc.* 1922, pp. 198-207, CHARLES DIEHL describes a number of discoveries made in and about Constantinople on the initiative of General Charpy of the French *corps d'occupation*. At Makri-Keui on the Sea of Marmora is the site of the Byzantine suburb known as Hebdomon. Excavations under the direction of Makridi Bey have uncovered here the ruins of a church of three apses, and an overthrown column of granite, the inscription on which mentions Theodosius. Numerous architectural and sculptural fragments were found in this region. Still more important discoveries were made on a site at the foot of the Old Seraglio, between that building and the sea. Here are the remains of a series of substructures, forming a compact and homogeneous group, and covering an area on both sides of the railway 180 metres long and 80 metres wide. This region was known in Byzantine times as the Mangana from the Mangana or arsenal in this quarter. It is known that Constantine Monomachos built a splendid church and monastery of St. George here in the eleventh century. The church was destroyed by Isaac Angelos, but the monastery still existed in the fifteenth century. The substructures which have been recently excavated show a great system of vaults planned to support a church in the form of a Greek cross, together with its fore-court. The basement itself forms a cistern. To the west of this basement is another great cistern, supported by twelve columns; and to the south of this an immense substructure, forming a cistern of thirty vaults supported by eight great piers alternating with ten massive columns. The ruins are filled with the debris of the superstructure; but numerous windows give access to other subterranean structures both to the east and the west. It seems clear that the basement of thirty vaults supported the palace of the Mangana, and that this was

destroyed after the Turkish occupation to furnish material for the construction of the Old Seraglio. A number of interesting architectural and sculptural fragments were found in the ruins. The most remarkable is a bas-relief of the eleventh century, representing the Virgin in adoration. It may be compared with a relief from Constantinople, now in Berlin, representing the same subject, with one in the church of Santa Maria in Porto near Ravenna; and with a third now placed in one of the walls of St. Mark's in Venice.

ITALY

BOLOGNA.—Church of San Petronio.—First steps are being taken toward restoring the church of San Petronio to its old time splendor. The walls are being cleaned to bring to light the old frescoes. So far, two frescoes have appeared. In the upper zone is the Ascension, in the lower, the Madonna with saints. The work reveals the hand of a painter of the first half of the fifteenth century. Giovanni da Modena is suggested as the author. (*Cron. B. A. I.*, 1922, p. 47.)

Matteo Gattaponi.—Hitherto, we have had little conception of the art of Matteo Gattaponi da Gubbio, because most of the architectural works known to have been carried out by him have disappeared almost completely. On the strength of newly found documents, F. FILIPPINI, in *Boll. Arte*, II, 1922, pp. 77-89 (12 figs.), is able to call attention to a number of buildings so well preserved that we may get from them a clear vision of the architect's style. Most important among them are the Palazzo dei Consoli in Gubbio, in which Gattaponi worked with Angiolo di Orvieto, the Rocca di Spoleto, the chapel of St. Catherine and the Infermeria Nuova of San Francesco at Assisi, and, particularly, the Collegio di Spagna at Bologna. It is easy to see that the Palazzo dei Consoli at Gubbio served as the model for all the rest. This severe pile, firmly built, elegant in its simplicity, is of a style which may be called *italic*, and that, *par excellence*; for it derives from the rustic quality of the ancient Umbrians.

BOVILLE ERNICA.—Relics of the Mausoleum of Boniface VIII.—Three interesting marble statuettes recently found in the private chapel of the Benedictine monastery at Boville, and now placed in the museum of the Palazzo Venezia, are published by C. S. SCARAFONI in *Boll. Arte*, I, 1922, pp. 567-573 (pl.; fig.). The statuettes represent the Virgin and angel of the Annunciation and the angel Michael. The style of the figures places them in the first years of the fourteenth century. They must have been among the things carried off to various parts of central Italy in the sixteenth century at the time of the demolition of the Constantinian basilica of San Pietro. Indeed, there are good reasons for believing that they originally formed part of the decoration of the tomb of Boniface VIII in St. Peter's. They were probably done by Giovanni Pisano, who worked with Arnolfo di Cambio on the tomb.

CAGLIARI.—A Subterranean Church.—In *N. Bull. Arch. Crist.* XXVII, 1921, pp. 39-43, A. TARAMELLI gives the conclusions derived from a recent investigation of the subterranean church, called the prison of St. Ephisius, under the church of that name in Cagliari. It appears that the underground edifice dates from the republican period, when it probably served as a place for celebrating the mysteries of Isis. As republican coins prove the early origin of the excavation, so coins of the empire indicate its continued use. It

was probably taken over by the Christians at the beginning of the Christian era, and then later, under the persecutions, it served as a prison. Finally, after the edict of Milan, it became a holy place, consecrated to its martyrs and serving as a tomb.

FLORENCE.—Ambrogio Lorenzetti.—In *Boll. Arte*, II, 1922, pp. 49-58 (pl.; 5 figs.), G. DE NICOLA publishes a Madonna and Child in the church of Sant' Angiolo in Vico l'Abate, a short distance from Florence, which puts quite a new face upon our understanding of the career of Ambrogio and of his relation to his brother, Pietro. For this painting is clearly by Ambrogio and since it is dated 1319, we must conclude that even at this early date, Ambrogio was master of himself, and therefore that artistically, at least, he was older than Pietro. The Sant' Angiolo picture was apparently painted in Florence and, therefore, indicates that Ambrogio visited Florence early in his career. It shows him strongly influenced by Giotto. But when he returned later to Florence, he had freed himself quite completely from that subjection and was thoroughly Sienese.

One of Michelangelo's Models.—In *L'Arte*, XXV, 1922, p. 100 (2 figs.), A. VENTURI publishes the clay model for Michelangelo's Medici tomb figure of Twilight. The model is in the little room which opens on the Medici chapel. It is interesting in showing Michelangelo's approach to his subject. Even more valuable than the sketch of the figure is the sketch of the sarcophagus on which he reclines; for this differs much from the finished monument. The proportions and spacing are better in the sketch than in the marble.

The Model of a Renaissance Church.—In *Boll. Arte*, I, 1922, pp. 563-566 (fig.), A. CHIAPPELLI tells of paintings of some importance in the little known church of San Giuseppe in the Via dei Malcontenti, Florence. But of more importance is the wooden model of the church, which he publishes. This model, by Baccio d'Agnolo, came to notice in 1913 but was not put into a museum, so it has again been quite lost to students. It is in perfect condition and gives a very clear idea of the original design of the church, which was not completely carried out. Its general character is solemn and monumental, betraying the spirit, if not the work, of Michelangelo. The importance and rarity of this example is emphasized by the statement that, aside from the poor model of the lantern of the cupola, preserved in the Opera del Duomo, no other model of such an old edifice has come down to us—a statement, however, which leaves out of account the model of St. Maclou at Rouen, which Frothingham has identified and has dated about 1420.

LUCCA.—The "Volto Santo."—For the first time the image of the crucified Christ treasured in the cathedral of Lucca and surrounded by so many legends has been photographed. This photograph is published in *Dedalo*, II, 1922, pp. 708-711 (pl.), by L. DAMI, who believes the sculpture may be dated in the latter part of the twelfth century.

PISA.—Simone Martini.—In *Dedalo*, III, 1922, pp. 5-14 (pl.; 9 figs.), L. DAMI publishes some good detailed reproductions of the important Pisan polyptych by Simone Martini. Though the painting has always been in Pisa (divided now between the Seminario Vescovile and the Museo Civico), it is less well known than other work by Simone on account of its not having been previously photographed. The painting was done for the church of Sta. Caterina, Pisa,

in 1320. It, therefore, belongs to Simone's middle period, when he was still under the charm of Duccio.

ROME.—An Inscription Referring to the Basilica Apostolorum.—In *N. Bull. Arch. Crist.* XXVII, 1921, pp. 61-69, O. MARUCCHI publishes an inscription from the ninth century Parisian codex 8071, which, if correctly interpreted by the present author, refers to the *Basilica Apostolorum*, now known as the basilica of San Sebastiano, on the Appian Way. Principally through comparison with other inscriptions of the time, Marucchi interprets the one here published as having been originally inscribed over the door of the church on the Appian Way and as meaning that the church was begun under Damasus, that Bizante worked on it, and that Pammachius, son of Bizante, finished it.

The Viale Manzoni Hypogeum.—In *N. Bull. Arch. Crist.* XXVII, 1921, pp. 44-47 and 83-93 (4 pls.), O. MARUCCHI writes concerning the hypogeum recently discovered on the Viale Manzoni, a hypogeum which offers unusual interest in its wall paintings. There are three rooms in the excavation and several galleries with tombs similar to the catacombs. Because of one peculiar painting, which has been interpreted as representing the return of Ulysses, some have thought that the hypogeum is of pagan origin. But there are some subjects, such as Christ teaching the sheep, which are distinctly Christian. The present author cleverly interprets the "Ulysses scene" as an illustration of a passage from the book of Job; other paintings on the walls he explains by other passages from the same book. Yet, while the Manzoni hypogeum must be Christian, it probably is not orthodox. In the first place, it is far from the locality of the familiar orthodox catacombs. Then, the subjects of the paintings are new. And, the significance of the number twelve emphasized in the decorations does not point to orthodox symbolism. These last two features do, however, suggest one certain heretical sect, the Valentinians.

The Hypogeum under San Sebastiano.—In *N. Bull. Arch. Crist.* XXVII, 1921, pp. 3-14 (5 pls.), O. MARUCCHI publishes the graffiti cut on the shaft leading into the hypogeum discovered in the excavations of 1919-20 under the basilica of San Sebastiano on the Appian Way. These rude graffiti, apparently inscribed there by visitors to the place, are in the form of invocations to Sts. Peter and Paul. They indicate that the place was held sacred and that the reason for its being held sacred was that it contained the sepulcher of the two apostles. Though the excavations were, at the time this article was written, too incomplete to warrant definite conclusions on some points, a recess had been found which shows some evidences of having been the repository for the leaden caskets containing the bones of these saints. Whether the relics were placed here soon after the death of Peter and Paul or not until the third century cannot yet be determined.

A Wooden Crucifix.—In *L'Arte*, XXV, 1922, pp. 102-104 (fig.), U. SESSINI publishes a hitherto unnoticed figure of the crucified Christ carved in wood, which may be seen in the Benedictine monastery of S. Ambrogio, near the Piazza Mattei, Rome. It has undergone some restorations, particularly in the coloring. But on the whole, it is a well-preserved example of the wood carving of the end of the Romanesque period. The author places it in the period after the Deposition of Volterra and before the Crucifixion of Modena, that is, about the middle of the thirteenth century. It shows fairly close

relationship with the Deposition of Parma, but, on the whole, it is strikingly original.

Michelangelo and Vanvitelli.—Superficial criticism has long judged all that is good in the church of Sta. Maria degli Angeli (built in the baths of Diocletian) to be the work of Michelangelo, and has blamed the eighteenth century architect, Vanvitelli, for all that is bad. In a careful study in *Gaz. B.-A.*, VII, 1922, pp. 195-217 (9 figs.), M. REYMOND and C. M. REYMOND throw a very different light upon the situation. It is here shown that Vanvitelli is responsible for the beauty of the large room, the finest part of the edifice, and that Michelangelo is responsible for the less successful nave. This exoneration of Vanvitelli is quite in keeping with the opinion the authors hold regarding the other works of Vanvitelli and eighteenth century Italian architecture in general.

Portraits of Columbus.—A portrait of Christopher Columbus found a short time ago and now in the Sherman collection at Rome is attributed by G. SOULIER in *Gaz. B.-A.* VI, 1922, pp. 81-87 (3 figs.), to Titian. It is true that the portrait lacks the spontaneity and spirit that characterize most of Titian's work. It is in this respect like his portrait of the doge Marcello, which is a posthumous portrait. The Sherman picture of Columbus also was executed after the death of the navigator. For Columbus died in 1506 and Titian's portrait of him could not have been done before 1508. The engraving of Columbus by Capriolo is so closely related to the Titian painting as to suggest that it was copied from the latter. But it is also possible that both the engraving and Titian's painting were derived from a third picture.

Portrait by a Dutch Artist.—In *Boll. Arte*, I, 1922, pp. 528-530 (pl.), G. J. HOOGWERFF publishes the portrait of a woman, evidently the wife or daughter of an aristocratic Italian, which came into possession of the Borghese Gallery as a copy. But close examination proves that it is not only an original, but that it is signed by its author, A. Palamedesz, who was born in Delft in 1601. The portrait is in a practically perfect state of preservation.

SULMONA.—An Antique Lamp.—In *N. Bull. Arch. Crist.* XXVII, 1921, pp. 101-105 (pl.), B. MANNA publishes a lamp from Sulmona, which, though crude work of the fourth or fifth century, is interesting for the subject represented upon it. Surrounded by a border of leaves, the composition in the centre, as here interpreted, shows the three children of Babylon brought by a soldier before the idol. Beside the idol, which consists of a bust placed on a column, sits the king on his throne.

VENICE.—Two Treasures Returned from Austria.—In *Dedalo*, III, 1922, pp. 139-160 (pl.; 12 figs.), G. FOGOLARI publishes two of the most famous art objects returned to Italy by Austria. One is Cardinal Bessarione's reliquary, restored to the Scuola della Carità. The most important part of this is a silver filigree cross set in a tablet of enamel. In its present form the reliquary goes back to the fourteenth century; but the cross is certainly much older. The second treasure is St. Theodore's cross, the most beautiful of all Venetian processional crosses. It belongs to the Scuola di San Teodoro and is attributed to the early fifteenth century Venetian goldsmith, Da Sesto. Its bronze support, made in 1567, is probably the work of Alessandro Vittoria. In *L'Arte*, XXV, 1922, pp. 142-148 (12 figs.), A. VENTURI writes of a number of other treasures that were returned to Italy by Austria by the same treaty as those above.

VERONA.—The Mummy of Can Grande.—In *Rass. d'Arte*, IX, 1922, pp. 135-139 (4 figs.), A. FERRERO describes what was found when the sarcophagus of Can Grande was opened last July. To everyone's surprise, the body of the prince was found almost completely intact, mummified. The sage and wormwood placed with the body had served to embalm it. It was clothed in draperies of rich silks and gold and silver brocade; these too were in good condition. No jewelry or armor was with the body except the fine, large sword. The results of the investigation of the tomb prove the untruth of the tradition that the sarcophagus was looted in the time of Napoleon — and, incidentally, that a stirrup in the Metropolitan Museum is from a part of the armor taken out at that time. For no one taking other things from the tomb would have left the most valuable treasure of all, the sword. Besides, the body showed no appearance of having been disturbed.

A Deposition Group.—In *Dedalo*, III, 1922, pp. 239-244 (3 figs.), F. N. VIGNOLA publishes a sculptured group lately brought to light and replaced in the church of San Fermo, Verona. The group now contains Christ, as he lay at the foot of the cross, and several weeping figures. But when Vasari saw the sculpture, only the Christ existed. This figure is probably the work of a Tuscan sculptor of the fifteenth century. The weeping figures are of a later date and the work of a Venetian sculptor.

SPAIN

BARCELONA.—A Spanish-Italian Altarpiece.—In *Burl. Mag.* XLI, 1922, pp. 298-303 (2 pls.), A. L. MAYER publishes a large triptych which recently passed into the possession of Don Luis Plandiura, Barcelona. The triptych came from the church of Estopiñan in the province of Huesca. It has passed as Spanish work. But the curious mixture of French and Italian influences suggests that the painter may have been an Italian provincial artist, of North Italy, who came by way of France to Spain. A. Van de Put adds a note to this article explaining the subject matter of the triptych. The large central figure represents St. Vincent, and some of the minor compositions deal with his history.

TOLEDO.—Some Pictures by El Greco.—In *Z. Bild. K.* LVII, 1922, pp. 7-10 (6 figs.), A. L. MAYER describes the Apostle cycle by El Greco in the main sacristy of the cathedral at Toledo and publishes photographs of some of the figures, showing the great improvement made by the recent cleaning of the pictures.

FRANCE

PARIS.—A Lombard Enamel.—In the Rothschild collection is an enamelled "Pace" which A. VENTURI, in *L'Arte*, XXV, 1922, pp. 117-118 (fig.), identifies as a Lombard production. It reminds one of the miniatures in the book of Bona Sforza, done by Antonio da Monza. The subject represented is the Marriage of St. Catherine.

A Fifteenth Century Painting of St. George.—A painting recently presented to the Louvre by M. Kleinberger is studied by L. DEMONTS in *Gaz. B.-A.* VII, 1922, pp. 276-282 (pl.). The painting gives, in most respects, the conventional representation of St. George slaying the dragon. (Fig. 5). But there is one respect in which it is unusual, the type of St. George and his costuming.

He is not the elegant, knightly St. George, but a boorish type in a squire's costume. This helps in locating the artist, whom the author believes to be the "Maitre du Hausbuch." The landscape seems to be what one would see



FIGURE 5.—SAINT GEORGE AND THE DRAGON: PARIS.

in the neighborhood of Lake Constance, where this master was in 1480, the date to which other details of the picture, such as the style of costume, point. This is a period in the career of the "Maitre du Hausbuch" when he had formed an absolutely personal art, but an art in which were intimately mixed

the characteristics of Dirk Bouts and the schools of Constance and the middle Rhine.

Recent Acquisitions of the Louvre.—Of the rich private donations to the Louvre since the war, a large share falls in the periods of the Middle Ages and the Renaissance. A number of the objects in these classes, including ivory carvings, enamels, ceramics, furniture, tapestry, and sculpture, are described by G. MIGEON in *Gaz. B.-A.* VII, 1922, pp. 133-147 (pl.; 12 figs.).

RHEIMS.—The Amulet of Charlemagne.—In *Ant. J.* II, 1922, pp. 350-353 (pl.), Sir MARTIN CONWAY announces that a famous jewel, the amulet of Charlemagne, is now in the care of the Archbishop of Rheims. This amulet was hung on the breast of Charlemagne when he was buried in regal state at Aix-la-Chapelle. Later it was removed from the tomb and preserved in the treasury of the cathedral. In 1804, on the occasion of a visit of Napoleon, the amulet was presented with other treasures of the cathedral to the Empress Josephine. It passed successively to Queen Hortense, Napoleon III, and the Empress Eugénie, who, shortly before her death, sent it to the Archbishop of Rheims with the request that it should be preserved among the treasures of the cathedral. The technique of the amulet is like that of other Carolingian jewelry, and there is no reason to doubt its authenticity.

TOULOUSE.—The Legend of Two Virgins.—In *Gaz. B.-A.* VI, 1922, pp. 88-96 (5 figs.), F. DE MÉLY throws light on a relief in the Museum of the Augustines at Toulouse, which has puzzled students for centuries, both as to date and as to subject matter. The relief represents two virgins, one holding a lion, the other a lamb. Evidently there is a relationship between the relief and a reported passage from St. Jerome which tells of a miracle at Toulouse in the time of Julius Caesar, when two virgins brought forth, one a lion, the other a lamb, thus announcing the Last Judgment, when the Saviour should appear to the damned like a terrible lion, to the just like a beneficent lamb. But the present study concludes that the relief gave rise to the legend, which is first mentioned in 1388, rather than vice versa. The relief must date in the twelfth century. The subject is undoubtedly an allegory, but just what it is remains undetermined.

BELGIUM

BRUSSELS.—Italian Primitives.—In *L'Arte*, XXV, 1922, pp. 161-169 (11 figs.), A. VENTURI writes on the exhibition of Italian primitives in the Royal Museum at Brussels, arranged by the director of the museum, Fierens Gevaert. The principal contributions come from the collections of Adolphe Stocklet and Michel van Gelder. Such interesting objects are included as a thirteenth century ivory crucifix, and paintings by the Master of Sta. Cecilia, the miniaturist of the codex of San Giorgio, Matteo da Viterbo, Giovanni di Paolo, Benvenuto di Giovanni, and Neroccio di Bartolomeo Landi. (See also F. BAUTIER, *Rass. d'Arte*, IX, 1922, pp. 185-188, 4 figs.)

English Embroideries.—In *Burl. Mag.* XLI, 1922, pp. 75-76 (2 pls.), G. S. SELIGMAN calls attention to the most important of what is really an important collection of examples of English *opus anglicanum* embroideries in the Musée du Cinquantenaire, Brussels. These pieces, which date from the thirteenth to the sixteenth century, have for the most part been previously assigned to other schools than the English. In re-attributing them, the author

gives some pertinent suggestions for the difficult task of distinguishing the various schools of embroidery.

SOIGNIES.—The Entombment.—A unique but hitherto unmentioned sculptured group of the Entombment in the church of St. Vincent at Soignies, in Belgium, is published by G. RING in *Z. Bild. K.* LVII, 1922, pp. 36-41 (9 figs.). It is tempting to connect with the group the name of Roger van der Weyden for several reasons. Roger's father was a sculptor at Tournai, near Soignies, and it was not until he was nearly thirty years old that Roger became a pupil of the painter, Robert Campin, of Tournai. Before this time it seems plausible to assume that he may have been working in his father's art. Roger's paintings, particularly his early ones, have a very sculpturesque effect; not only are decorative accessories paintings of sculpture, the main figures themselves are round and sculpturesque. Indeed, some critics, such as Maeterlinck, have attempted to assign certain sculptural works to Roger but none of these ascriptions are quite satisfactory. Finally, the present work itself cannot justify an ascription to Roger, especially since the date to which it must be assigned, about 1450, lies in the artist's period of greatest activity as a painter, when one would not expect him to turn suddenly to sculpture. Besides, it is unlikely that among the quite full records of Tournai sculptors Roger's name would have been omitted had he done any important work in sculpture. For the present, at least, we must account for the parallels that we find between painted and sculptured works of this kind by the close relationships existing between the sculptors and the painters of the time.

GERMANY AND AUSTRIA

AUGSBURG.—The Sculptor Jörg Muscat.—In *Münchner Jb.* XII, 1922, pp. 98-111 (7 figs.), K. FEUCHTMAYR ascribes to the Augsburg master, Jörg Muscat, a number of bronze busts, which have formerly been recognized as the work of one hand. They include a bust of the Emperor Maximilian I and one of his mother, Eleonore, in the Vienna collection of Plastik und Kunstgewerbe, and the bust of Philip the Good, formerly in the collection of the King of Württemberg. The principal basis for the ascription of the group to Muscat is the likeness of the style of the busts to the figures in relief on the epitaph for Christoph von Tannberg, which is the work of this sixteenth century artist.

BERLIN.—Two Early Christian Medallions.—In *Ber. Kunsts.* XLIII, 1922, pp. 80-84 (5 figs.) W. F. VOLBACH describes two gold medallions recently acquired from an Italian source for the Berlin Museums. One represents Christ and the doubting Thomas with the other disciples; the other Daniel in the den of lions. In subjects and style they are closely related to the Palestinian gold ampullae at Monza, and to other works of Palestinian origin.

A Fifteenth Century Madonna.—In the collection of Paolo Cassirer in Berlin is an enthroned Madonna between two angels which has been attributed to Masolino. A. COLASANTI, in *Boll. Arte*, I, 1922, pp. 539-545 (pl.; 5 figs.), sees in it the hand of Arcangelo di Cola da Camerino, the eclectic whose chief inspiration was Gentile da Fabriano. Comparison with other paintings by Arcangelo di Cola shows in the Berlin picture just the same peculiar combination of the characteristics of Gentile and of Florentine artists of the early fifteenth century. Since it follows the later works of Gentile, the Cassirer

Madonna must be placed later than the other paintings now known by its author. Colasanti also assigns to this artist a painting recently attributed by Venturi to Gentile, the Madonna with angels in the Stroganoff collection at Petrograd.

Two Reliefs of the Augsburg School.—In *Ber. Kunsts.* XLIII, 1922, pp. 84-88 (5 figs.), W. STECHOW reports that the Berlin Museums have acquired two reliefs from an altar of the German Renaissance period, one representing the birth of the Virgin, the other the Meeting at the Golden Gate. They are to be attributed to an Augsburg atelier of about 1520-1525.

A Relief by Paul von Vianen.—In *Ber. Kunsts.* XLII, 1922, pp. 110-112 (2 figs.), E. F. BANGE reports that the Berlin Museums have acquired a circular plaque with a relief which on stylistic grounds is attributed to Paul von Vianen. The subject is the story of Actaeon.

BREISACH.—**Martin Schongauer.**—In the cathedral at Breisach are some fragmentary remains of frescoes which attract very little attention because of their bad condition. They are given new importance by K. GUTMANN in *Rep. f. K.* XLIII, 1921, pp. 62-80 (5 figs.), who sees in them the work of Schongauer, who died in Breisach and was one of its most honored citizens. The painting is characterized by that master's style throughout, and in detail parallels may be found among his engravings. It is closely related also to representations of the same subject, the Last Judgment, in Danzig, Beaune, and Berlin, which are variously ascribed to Memling and Roger van der Weyden. Gutmann shows the existence of a particularly close dependence of the Breisach frescoes upon the Danzig painting, which he believes to be the work of Memling. And since he believes that Schongauer could not have seen the painting in Danzig, it follows that he must have seen the studies for it in the artist's — presumably Memling's — workshop, and, therefore, that Memling was probably the teacher of Schongauer. The important result of the present study is the evidence that Schongauer worked in fresco. So we may hope to find some of his lost works of fame under later wall coverings in churches. In fact, at the time of this writing another was being uncovered in the church at Mühlheim a. d. Eis.

DRESDEN.—**The Enigma of the Sistine Madonna.**—In *Z. Bild. K.* LVII, 1922, pp. 41-49 (4 figs.), H. GRIMME publishes a study which he believes proves that the correct name for the so-called Sistine Madonna is the "Madonna of Pope Julius II." All the elements of the picture point to the proximity of a tomb. St. Barbara is, in her special function, intercessor for the dead. The Madonna coming down out of Heaven, exhibiting her Child in this serious, dignified manner, answers perfectly to the description of her in the *Salve Regina* prayer for the dead. The curtains drawn back at the sides correspond to the customary curtains of the tomb niche. The whole composition of the picture is that of the tomb niche: the Madonna and Child in the top zone (usually in a tondo in the sculptured niche), the saints in the second zone, and the sarcophagus with angels in the lowest zone. For the ledge on which the angels are leaning is to be interpreted as the top of a sarcophagus. Further, the tiara placed on it indicates that the deceased was a pope, and the acorn and oak leaves at the summit of the tiara and on the lower edge of the drapery nearby indicate that the pope is of the Rovere family; it must, then, be Julius II. The figure at the left of the picture,

corresponding to St. Barbara on the right, may be identified by comparison with Botticelli's painting in the Sistine chapel as Pope Sixtus II, who was a specially honored saint for the Rovere family and is, therefore, appropriate as an intercessor for Julius II. It seems most likely that the painting, then, was originally intended as a part of the decoration of Julius II's tomb; and indeed one of Michelangelo's drawings for the tomb (1515) shows in the central part a painting not greatly unlike Raphael's. When the plans for the tomb were given up, Raphael had to look for a distant place to dispose of his painting, where its original intention would not be understood or would be overlooked. It is thus that we must account for the acquisition of the work by the monks of Piacenza.

ERBACH.—An Early Work by Grünewald.—Known to us only by mature works, Grünewald is an artist to whose youthful activity it would seem rather hazardous to attribute an unsigned, undocumented work. Yet that is what is done by V. C. HABICHT in *Mh. f. Kunstw.* XV, 1922, pp. 40-56 (8 figs.). The work in question comprises eight round panes of painted glass now in the castle at Erbach i. O. The subjects represented are scenes from the life of Christ. The painting is clearly the clumsy work of an untrained beginner. But it is what we should expect from a beginner with such a future as Grünewald's.

FRANKFURT.—In *Mh. f. Kunstw.* XV, 1922, p. 148 (3 figs.), K. SIMON suggests the possibility of a portrait of Grünewald in Uffenbach's picture of the Resurrection of the Dead in the Historical Museum at Frankfurt a. M. Most of the figures among the resurrected have ideal types of faces, but one is very portrait-like, and since it resembles the head of St. Sebastian in Grünewald's Isenheim altar at Colmar, it may be considered as a point in favor of the hypothesis that the St. Sebastian head is a self-portrait of Grünewald. For Uffenbach was a pupil of a pupil of Grünewald, and may have wished to pay tribute to the famous artist by putting his portrait among the resurrected.

FREIBERG.—The Master of the "Tulip Pulpit."—Some years ago in his study of the late Gothic North Saxon sculptors in the towns on the north slope of the Erzgebirge, Bode singled out a group of superior works which reminded him of Adam Kraft and Riemenschneider. Work has been done on these since but always without clearing away the mystery that has hung over the master's personality and his productions. The most significant work is the "Tulip Pulpit" in Freiberg. Now W. JUNIUS in *Mh. f. Kunstw.* XV, 1922, pp. 137-147 (12 figs.), calls attention to works in Chemnitz and elsewhere that are clearly by the same hand as the important piece in Freiberg. Some of these are signed "H. W." So we may henceforth speak of the leader of the Erzgebirge group as "Master H. W."

VIENNA.—List of Paintings Owned by Van Dyck.—In *Z. Bild. K.* LVII, 1922, pp. 22-24 (fig.), J. MÜLLER-ROSTOCK publishes an interesting document which she found among the records of the Vienna imperial archives. It contains a list of the paintings by Titian and other masters, originals and copies, owned by Van Dyck. The publisher is able to identify most of the paintings mentioned in the thirty-seven entries. Most of them are pictures that would be of special interest to Van Dyck as a portrait painter. The list must have been made between 1630 and 1640, judging by what we know of

the date of the painting of some of the pictures and the date of the acquisition of some of them by other collectors. It is interesting to see that Van Dyck was not only continually adding to his collection, but that he also parted with an example now and then, so that the character of his collection was changing.

Tintoretto as Cassone Painter.—Winckelmann's wish for paintings by Tintoretto on a small scale is satisfied by D. F. VON HADELN's ascription to this artist of six long, narrow pictures in the State Picture Gallery at Vienna which were formerly ascribed to Andrea Schiavone. Details from these paintings, which represent scenes from the Old Testament, show the decisive characteristics of the style of Tintoretto. It does not seem likely that they were originally let into the fronts of chests. It is more probable that they served as models for furniture decorators. Four other paintings, in the Museo Civico at Verona, likewise formerly ascribed to Schiavone, are here used as evidence that Tintoretto made models for the cassone painter. For while the paintings in question are not by the hand of the master himself, they show all evidence of having been copied from him. All these works are to be dated shortly before 1548. (*Z. Bild. K.* LVII, 1922, pp. 27-36; 14 figs.)

A Putti Group.—In *Z. Bild. K.* LVII, 1922, pp. 49-52 (7 figs.), E. KRIS ascribes the putti group carved out of pear wood, in the Kunsthistorischen Museum at Vienna, to Adolf Daucher. The basis of the ascription lies in the similarity of the work to Daucher's sculptural decorations in the Fugger chapel in the church of St. Anna at Augsburg. The unified conception of the work points to Italian influence; but the individual forms are thoroughly northern.

Unidentified Drawings.—In *L'Arte*, XXV, 1922, pp. 112-115 (4 figs.), A. VENTURI describes some drawings in the Albertina which had previously been unidentified or incorrectly attributed. A drawing of four angels is here attributed to Stefano da Zevio; a drawing for a Nativity, to Savoldo; a portrait drawing of a man's head to Lotto in his youth; and a study of a woman for the "Incendio di Borgo," to Raphael.

Two Portrait Miniatures.—Two portrait miniatures from the once famous collection of Ambras Castle are discussed by J. SCHLOSSER in *Burl. Mag.* XLI, 1922, pp. 194-198 (pl.). They have always, in the brief notices given them, been considered as companion pieces, representing a man and his wife. A comparison of them shows that they are clearly of very different styles and qualities. The portrait of a man is a self-portrait by the famous miniaturist Clovio, who was born in Croatia, and went to Italy and studied under Giulio Romano. It is rather weak, but is interesting because it is the only self-portrait we have by Clovio. The other miniature, a portrait of a woman, is much finer. It might almost be attributed to Holbein the Younger. It is, in fact, copied from Holbein's cartoon study for a portrait of the Marchioness of Dorset. But the miniature itself is not quite equal to Holbein; it must be a school piece.

GREAT BRITAIN

LONDON.—**Acquisitions of the National Gallery.**—The most interesting of the paintings lately acquired by the National Gallery is a work of the French school of about 1400 representing the Holy Trinity with Angels. Its beauty lies largely in its decorative quality and its particular interest in the fact that it seems to derive from the group of miniaturists working for the Duc

de Berri, being itself in the nature of a glorified and enlarged miniature, and also in the fact that we apparently have in this picture a proof of a connection between the school of Jacquemart de Hesdin and the school of Cologne. Some recently acquired works of the Spanish, Dutch, and Italian schools are described in this article also. (C. HOLMES, *Burl. Mag.* XLI, 1922, pp. 76-87; 2 pls.)

A Painting Attributed to Bono da Ferrara.—In the National Gallery is a painting of St. Jerome which bears the name of Bono da Ferrara. But A. VENTURI, in *L'Arte*, XXV, 1922, pp. 105-108 (2 figs.), shows that the inscription is falsified and that the work bears much more similarity to the style of Pisanello than to that of Bono. One argument for attributing the work to Pisanello himself is the fact that the poem in which Guarini describes a painting of St. Jerome, gift of Pisanello, describes the National Gallery picture quite completely. The quality of the painting is somewhat inferior to that of the paintings we know by Pisanello, and if this one is his, it must belong to his earliest period, while he was still working in a miniature-like style, and before his medallist creations.

A Portrait by Botticelli.—In the recent exhibition of the Holford collection in the Burlington Fine Arts Club was a portrait representing St. Thomas Aquinas, which has been variously attributed. In *L'Arte*, XXV, 1922, pp. 153-154 (fig.), A. VENTURI offers a new attribution, to Botticelli. The painting would fall in the period of the artist's Roman work.

A Fifteenth Century Tapestry.—An unusually fine tapestry which was discovered some years ago in a cupboard at Compton Verney and which was lately obtained for the Victoria and Albert Museum is published by A. F. KENDRICK in *Burl. Mag.* XLI, 1922, pp. 259-260 (pl.; fig.). The tapestry is remarkably well preserved, showing that it has been little exposed. The style suggests that Roger van der Weyden may have been its designer. Probably it was woven either in Tournai, of which Roger was a native, or in Arras. At any rate, its origin should be located somewhere on the Franco-Flemish border, for there is a touch of French grace in the work, alien to the realistic school of the Van Eycks.

PETERBOROUGH.—An Unrecorded Signorelli.—A large panel painting in the collection of Col. Douglas Proby, which has been ascribed to Ridolfo Ghirlandaio, is attributed by T. BORENIUS in *Burl. Mag.* XLI, 1922, pp. 205-206 (pl.) to Signorelli. The attribution is based largely upon relationships to the Orvieto frescoes. The panel presumably dates, therefore, about 1499-1501. Borenius believes that the gentleness and engaging quality in the picture, unusual for Signorelli, account for its not having previously been recognized as his work. The subject is the Virgin of Mercy.

SOMERSET.—A Saxon Pendant.—Mr. BULLEID reports the discovery at Burnett in Somerset of a Saxon pendant. It is in the form of a circular plate of gold nearly an inch of diameter. On it is a cross formed of twisted gold wire in triple lines. In the centre is a dark purple stone or paste. It is to be dated in the sixth or the seventh century. (*Ant. J.* II, 1922, p. 383; fig.)

UNITED STATES

BOSTON.—Andrea Vanni.—Two panels, representing Peter and Paul, that have lately been given to the Museum of Fine Arts, are published by R. VAN

MARLE in *Art in America*, X, 1922, pp. 230-232 (2 figs.), as the work of Andrea Vanni in his early and best period. To the same artist, but in his late period, is attributed a half figure of St. Elizabeth, apparently a fragment from a polyptych, in Mrs. Gardner's collection.

The Sherman Collection.—In *B. Mus. F. A.* XX, 1922, pp. 57-58 (2 figs.), a collection of objects of art recently given to the Museum by Mr. and Mrs. Henry H. Sherman is briefly described. Two pictures in the collection are illustrated: Scenes from the lives of Christ and of various saints, by Sassetta, and a Descent from the Cross by Cosimo Rosselli.

CAMBRIDGE.—Romanesque Capitals.—Recent visitors to the Fogg Art

Museum of Harvard University have recognized in the sixteen Romanesque capitals now installed in that collection an accession which illustrates brilliantly a period and style of architectural sculpture but little represented in American museums. These capitals have been concisely described by A. KINGSLEY POR-

TER (Fogg Art Museum, Harvard University, *Notes*, I, No. 2, June, 1922, pp. 22-36; 28 figs.). Twelve are from the ruined church of Moutier-Saint-Jean, which belonged to an abbey in the valley of the Récôme, near Semur in Burgundy. The church was built by the abbot Bernard II, who died in 1133; and the capitals are, therefore, to be attributed to the first part of the twelfth century. In style they are most closely related to those of Saulieu and to those of Autun, belonging to about the third decade of the century. Nine of the Moutier-Saint-Jean



FIGURE 6.—ZACHARIAS AND THE ANGEL:
ROMANESQUE CAPITAL: CAMBRIDGE.



FIGURE 7.—THE JOURNEY TO EMMAUS:
ROMANESQUE CAPITAL: CAMBRIDGE.

capitals in the Fogg Museum are vigorous and delicate examples of pure design. The other three are of special interest as examples of Burgundian figure sculpture. On one is shown the Angel appearing to Zacharias (Fig. 6). Subordinate scenes show Elizabeth accompanied by another figure, and a quaint representation of the temple, with a demon peering over the battlements, and a cowed figure seated on the roof. On another is the Journey to



FIGURE 8.—THE SACRIFICES OF CAIN AND ABEL:
ROMANESQUE CAPITAL: CAMBRIDGE.

Emmaus; here two angels hovering at right and left are of special beauty (Fig. 7). The third represents the sacrifice of Cain and Abel (Fig. 8). The two brothers are separated by a double-headed eagle, an Eastern motive which may have come to Burgundy in textile designs. The other four capitals are from the abbey of Saint-Pons, on the southern edge of the Cevennes. These have been published with other fragments from the same abbey by J. Sahuc (*L'Art roman à Saint-Pons-de-Thomières*) and are also discussed by A. Michel (*Histoire de l'Art*, I, pp. 630 ff.). The monastery

was pillaged and destroyed in 1171, but restored in the same century; and the capitals belong to this period. The earliest may antedate the restoration. On three sides of it are represented the Feast at Emmaus, the journey to Emmaus, and the city of Emmaus or Jerusalem; on the fourth side is the *Noli me tangere*. On the second capital is the *Majestas Domini*, and subordinate figures of Apostles. On the third capital is an unusual subject—the Sacrifice of Blood and Bread according to the Old Testament, prefiguring the Eucharist. The fourth shows the Feast in the House of Simon. On a second face is a representation of the kitchen in which the feast is prepared. The other sides show Christ in the house of Mary and Martha.

DETROIT.—*Rubens and Van Dyck.*—In *Art in America*, X, 1922, pp. 203-209 (5 figs.), W. R. VALENTINER publishes a painting in the Detroit Museum, which he considers one of the most important of Rubens' works. It represents the meeting of Abigail and David. The sketch of this subject in a private collection in Berlin is probably a student's copy of Rubens' study for the Detroit picture. Another painting in the Detroit Museum, a portrait group of a man and woman, has passed as a portrait of Franz Snyder and his wife by Cornelis de Vos. It is here shown to represent Jan Wildens and his wife, and to be an early work by Van Dyck.

NEW YORK.—*A Gothic Crucifix.*—A crucifix carved in oak and retaining

much of its original polychromy has been acquired by the Metropolitan Museum. Because of its mixture of earlier Gothic idealism with the pathetic and realistic quality of later Gothic work, this object is to be dated late in the thirteenth or early in the fourteenth century. In style it shows a close analogy to an ivory triptych from St. Sulpice-de-Tarn, now in the Cluny Museum. (H. S., *B. Metr. Mus.* XVII, 1922; pp. 257-258; fig.)

A Historic Casque.—In *B. Metr. Mus.* XVII, 1922, pp. 232-238 (3 figs.), B. D(EAN) shows that a sumptuously ornamented casque of Renaissance style recently acquired by the Metropolitan Museum is identical with the one which appears in a portrait of Cosimo de' Medici II, and, therefore, was once the property of that prince.

Prints of the Master E. S.—W. M. I(VINS) reports that through the sale of duplicates from the now combined public collections of Vienna, the Metropolitan Museum has acquired a series of prints by the German master E. S., the greatest of the German engravers before 1470. (*B. Metr. Mus.* XVII, 1922, pp. 260-265; 3 figs.)

PROVIDENCE.—An Ivory Diptych.—In *B. R. I. Des.* XI, 1923, pp. 2-4 (3 figs.), L. E. R(OWE) describes a French Gothic ivory diptych of the late thirteenth century recently acquired by the Rhode Island School of Design. In the lower part of the left panel are represented the Annunciation and the Nativity; in the lower part of the right panel is the Adoration of the Magi. The upper part of the left panel shows the Crucifixion and the Coronation of the Virgin; that of the right panel the Last Judgment. Over each scene is a finely executed Gothic arcade. The diptych is compared with one from Soissons in the Victoria and Albert Museum, and with diptychs in the Cluny Museum and the Louvre.

A Drawing by Titian.—In *B. R. I. Des.* XI, 1923, pp. 4-5 (fig.), L. E. R(OWE) reports that the Rhode Island School of Design has purchased a drawing of a hunting scene, attributed on excellent authority to Titian. It is published by Claude Phillips in his monograph, *The Late Work of Titian* (p. 38). J. P. Richter has assigned it to the early or middle period of the artist, but C. Ricketts (*Titian*, p. 160 f.) confirms Phillips' opinion that it is late.

WORCESTER.—A Portrait by Dubordieu.—By comparison with a signed portrait in Heemstede, W. MARTIN, in *Burl. Mag.*, XLI, 1922, pp. 217-218 (2 pls.), attributes a life-size portrait of a woman in the Worcester Museum to Pieter Dubordieu. The portrait was painted in 1631, one year after this French painter came to Leyden, and it still retains a curious mixture of French and Flemish characteristics. Two other portraits are here attributed to the same artist. One, the portrait of a man in the Stuers collection, belongs, like the Worcester canvas, to the early Leyden period, and is almost entirely French. The other, a portrait of a woman in the von Auspitz collection, Vienna, must have been done about 1640 and is much more Dutch.

AUSTRALIA

MELBOURNE.—A Madonna by Van Eyck.—In *Burl. Mag.* XLI, 1922, pp. 232-235 (pl.), C. J. HOLMES writes of the recent acquisition by the Melbourne Gallery of the well-known Jan van Eyck Madonna formerly owned by Mr. Weld-Blundell. The present publication shows the picture in a much better state than it has been seen in before; for a thick coat of brown, cracked varnish has recently been removed from it.

ABBREVIATIONS

Abh.: Abhandlungen. *Allg. Ztg.*: Münchener Allgemeine Zeitung. *Alt. Or.*: Der alte Orient. *Am. Anthr.*: American Anthropologist. *A.J.A.*: American Journal of Archaeology. *A. J. Num.*: American Journal of Numismatics. *A. J. Sem. Lang.*: American Journal of Semitic Languages and Literature. *Ami d. Mon.*: Ami des Monuments. *Ant. Denk.*: Antike Denkmäler. *Ann. Arch. Anth.*: Annals of Archaeology and Anthropology. *Ann. Scuol. It. At.*: Annuario della r. Scuola Archeologica di Atene e delle Missioni Italiane in Oriente. *Ant. J.*: The Antiquaries Journal. *Arch. Anz.*: Archäologischer Anzeiger. *Arch. Δελτ.*: 'Αρχαιολογικὸν Δελτίον. *Arch. 'Εφ.*: 'Αρχαιολογική Ἐφημερίς. *Arch. Rec.*: Architectural Record. *Arch. Rel.*: Archiv für Religionswissenschaft. *Arch. Miss.*: Archives de Missions Scientifiques et Littéraires. *Arch. Stor. Art.*: Archivio Storico dell'Arte. *Athen.*: Athenaeum (of London). *Ath. Mitt.*: Mitteilungen d. d. Archäol. Instituts, Athen. Abt.

Beitr. Assyriol.: Beiträge zur Assyriologie. *Ber. Kunsts.*: Amtliche Berichte aus den Preuss. Kunstsammlungen. *Berl. Akad.*: Preussische Akademie der Wissenschaften zu Berlin. *Berl. Phil. W.*: Berliner Philologische Wochenschrift. *Bibl. Stud.*: Biblische Studien. *Bibl. World*: The Biblical World. *B. Soc. Esp.*: Boletín de la Sociedad Española de Excursiones. *Boll. Arte*: Bollettino d'Arte. *Boll. Num.*: Bollettino Italiano di Numismatica. *Bonn. Jb.*: Bonner Jahrbücher: Jahrbücher des Vereins von Altertumsfreunden im Rheinlande. *B.S.A.*: Annual of the British School at Athens. *B.S.R.*: Papers of the British School at Rome. *B. Arch. C. T.*: Bulletin Archéologique du Comité des Travaux hist. et scient. *B. Arch. M.*: Bulletin Archéol. du Ministère. *B.C.H.*: Bulletin de Correspondance Hellénique. *B. Cleve. Mus.*: Bulletin of the Cleveland Museum of Art. *B. Inst. Gen.*: Bulletin de l'Institut National Genevois. *B. Inst. Ég.*: Bulletin de l'Institut Égyptien (Cairo). *B. Metr. Mus.*: Bulletin of the Metropolitan Museum of Art, New York. *B. Mus. Brux.*: Bulletin des Musées Royaux des arts décoratifs et industriels à Bruxelles. *B. Mus. F. A.*: Museum of Fine Arts Bulletin, Boston. *B. N. Y. Hist. Soc.*: New York Historical Society Quarterly Bulletin. *B. Num.*: Bulletin de Numismatique. *B. R. I. Des.*: Bulletin of the Rhode Island School of Design. *B. Soc. Anth.*: Bulletin de la Société d'Anthropologie de Paris. *B. Soc. Midi Fr.*: Bulletin de la Société Archéologique du Midi de la France. *B. Com. Rom.*: Bullettino d. Commissione Archeologica Comunale di Roma. *B. Arch. Crist.*: Bullettino di Archeologia Cristiana. *B. Pal. It.*: Bullettino di Paleologia Italiana. *Burl. Mag.*: Burlington Magazine. *B. Soc. Ant. Fr.*: Bulletin de la Société des Antiquaires de France. *Byz. Z.*: Byzantinische Zeitschrift.

Chron. Arts: Chronique des Arts. *Cl. Phil.*: Classical Philology. *Cl. R.*: Classical Review. *C. R. Acad. Insc.*: Comptes Rendus de l'Académie des Inscriptions et Belles-Lettres. *C.I.A.*: Corpus Inscriptionum Atticarum. *C.I.G.*: Corpus Inscriptionum Graecarum. *C.I.L.*: Corpus Inscriptionum Latinarum. *C.I.S.*: Corpus Inscriptionum Semiticarum. *Cron. B. A.*: Cronaca delle Belle Arti.

Eph. Ep.: Ephemeris Epigraphica. *Eph. Sem. Ep.*: Ephemeris für Semitische Epigraphik. *Exp. Times*: The Expository Times.

Gaz. B.-A.: Gazette des Beaux-Arts. *G.D.I.*: Sammlung der griechischen Dialekt-Inschriften.

Ind. Notes: Indian Notes and Monographs. *I.G.*: Inscriptiones Graecae (for contents and numbering of volumes, cf. *A.J.A.* IX, 1905, pp. 96-97). *I.G.A.*: Inscriptiones Graecae Antiquissimae, ed. Roehl. *I.G. Arg.*: Inscriptiones Graecae Argolidis. *I. G. Ins.*: Inscriptiones Graecarum Insularum. *I.G. Sept.*: Inscriptiones Graecae Septentrionalis. *I.G. Sic. It.*: Inscriptiones Graecae Siciliae et Italiae.

Jb. Arch. I.: Jahrbuch d. d. Archäol. Instituts. *Jb. Kl. Alt.*: Neue Jahrbücher für das klassische Altertum, Geschichte und deutsche Litteratur und für Pädagogik. *Jb. Kunst. Samm.*: Jahrbuch der kunsthistorischen Sammlungen des allerhöchsten Kaiserhauses. *Jb. Phil. Päd.*: Neue Jahrbücher für Philologie und Pädagogik (Fleckeisen's Jahrbücher). *Jb. Preuss. Kunsts.*: Jahrbuch d. Preuss. Kunstsammlungen. *Jh. Oest. Arch. I.*: Jahreshefte des österreichischen Archäologischen Instituts. *J. Asiat.*: Journal Asiatique.

J.A.O.S.: Journal of the American Oriental Society. *J. B. Archaeol.*: Journal of the British Archaeological Association. *J. B. Archit.*: Journal of the Royal Institute of British Architects. *J. Bibl. Lit.*: Journal of Biblical Literature. *J.E.A.*: Journal of Egyptian Archaeology. *J.H.S.*: Journal of Hellenic Studies. *J. Int. Arch. Num.*: *Διεθνὴς Ἐφημερίς τῆς νομισματικῆς ἀρχαιολογίας*, Journal international d'archéologie numismatique (Athens). *J.R.S.*: Journal of Roman Studies.

Kunstchr.: Kunstchronik.

Mb. Num. Ges. Wien.: Monatsblatt der Numismatischen Gesellschaft in Wien. *Mh. f. Kunstw.*: Monatshefte für Kunstwissenschaft. *Mél. Arch. Hist.*: *Mélanges d'Archéologie et d'Histoire* (of French School in Rome). *Mél. Fac. Or.*: *Mélanges de la Faculté Orientale*, Beirut. *M. Inst. Gen.*: *Mémoires de l'Institut Genevois*. *M. Am. Acad. Rome*: *Memoirs of the American Academy in Rome*. *M. Soc. Ant. Fr.*: *Mémoires de la Société des Antiquaires de France*. *Mitt. Anth. Ges.*: *Mitteilungen der anthropologischen Gesellschaft in Wien*. *Mitt. Or. Ges.*: *Mitteilungen der deutschen Orient-Gesellschaft*. *Mitt. Pal. V.*: *Mitteilungen und Nachrichten des deutschen Palästina-Vereins*. *Mitt. Vorderas. Ges.*: *Mitteilungen der vorderasiatischen Gesellschaft*. *Mon. Ant.*: *Monumenti Antichi* (of Accad. d. Lincei). *Mon. Piot*: *Monuments et Mémoires pub. par l'Acad. des Inscriptions, etc.* (Fondation Piot.) *Mün. Akad.*: Bayerische Akademie der Wissenschaften, München. *Mün. Jb. Bild. K.*: Münchner Jahrbuch der bildenden Kunst. *Mus. J.*: The Museum Journal of the University of Pennsylvania.

N.D. All.: Nachrichten über deutsche Altertumskunde. *Not. Arch.*: *Notiziario Archeologico*. *Not. Scav.*: *Notizie degli Scavi di Antichità*. *Num. Chron.*: Numismatic Chronicle. *Num. Notes*: Numismatic Notes and Monographs. *Num. Z.*: Numismatische Zeitschrift. *N. Arch. Ven.*: *Nuovo Archivio Veneto*. *N. Bull. Arch. Crist.*: *Nuovo Bullettino di Archeologia cristiana*.

Or. Lit.: Orientalistische Literaturzeitung. *Or. Lux.*: *Ex Oriente Lux*. *Pal. Ez. Fund.*: Quarterly Statement of the Palestine Exploration Fund. *Πρακτικά*: *Πρακτικά τῆς ἐν Ἀθήναις ἀρχαιολογικῆς ἐταιρείας*. *Proc. Soc. Ant.*: Proceedings of the Society of Antiquaries.

Rass. d'Arte: *Rassegna d'Arte*. *R. Tr. Eg. Assyr.*: *Recueil de travaux relatifs à la philologie et à l'archéologie égyptiennes et assyriennes*. *Rend. Acc. Lincei*: *Rendiconti d. r. Accademia dei Lincei*. *Rep. f. K.*: *Repertorium für Kunstwissenschaft*. *R. Assoc. Barc.*: *Revista de la Asociacion artistico-arqueologica Barcelonesa*. *R. Arch. Bibl. Mus.*: *Revista di Archivi Bibliotecas, y Museos*. *R. Arch.*: *Revue Archéologique*. *R. Art. Anc. Mod.*: *Revue de l'Art ancien et moderne*. *R. Art Chrét.*: *Revue de l'Art Chrétien*. *R. Belge Num.*: *Revue Belge de Numismatique*. *R. Bibl.*: *Revue Biblique Internationale*. *R. Ép.*: *Revue Épigraphique*. *R. Ét. Anc.*: *Revue des Études Anciennes*. *R. Ét. Gr.*: *Revue des Études Grecques*. *R. Ét. J.*: *Revue des Études Juives*. *R. Hist. Rel.*: *Revue de l'Histoire des Religions*. *R. Num.*: *Revue Numismatique*. *R. Or. Lat.*: *Revue de l'Orient Latin*. *R. Sém.*: *Revue Sémitique*. *R. Suisse Num.*: *Revue Suisse de Numismatique*. *Rh. Mus.*: *Rheinisches Museum für Philologie, Neue Folge*. *R. Abruzz.*: *Rivista Abruzzese di Scienze, Lettere ed Arte*. *R. Ital. Num.*: *Rivista Italiana Numismatica*. *R. Stor. Ant.*: *Rivista di Storia Antica*. *R. Stor. Calabr.*: *Rivista Storica Calabrese*. *R. Stor. Ital.*: *Rivista Storica Italiana*. *Röm.-Germ. Forsch.*: Bericht über die Fortschritte der Römisch-Germanischen Forschung. *Röm.-Germ. Kb.*: Römisch-Germanisches Korrespondenzblatt. *Röm. Mitt.*: *Mitteilungen d. d. Archäol. Instituts, Röm. Abt.*. *Rom. Quart.*: Römische Quartalschrift für christliche Altertumskunde und für Kirchengeschichte.

Sächs. Ges.: Sächsische Gesellschaft (Leipsic). *Sitzb.*: Sitzungsberichte. *S. Bibl. Arch.*: Society of Biblical Archaeology, Proceedings.

W. kl. Phil.: Wochenschrift für klassische Philologie.

Z. D. Pal. V.: Zeitschrift des Deutschen Palästina-Vereins. *Z. Aeg. Sp. All.*: Zeitschrift für Aegyptische Sprache und Altertumskunde. *Z. Alttest. Wiss.*: Zeitschrift für Alttestamentliche Wissenschaft. *Z. Assyr.*: Zeitschrift für Assyriologie. *Z. Bild. K.*: Zeitschrift für Bildende Kunst. *Z. Ethn.*: Zeitschrift für Ethnologie. *Z. Morgenl.*: Wiener Zeitschrift für die Kunde des Morgenlands. *Z. Morgenl. Ges.*: Zeitschrift der deutschen Morgenländischen Gesellschaft. *Z. Mün. All.*: Zeitschrift des Münchener Alterthumsvereins. *Z. Num.*: Zeitschrift für Numismatik.



TERRA-COTTA TILE FOUND AT SARDES.



TERRA-COTTA TILE FROM SARDES IN THE LOUVRE.

A TERRA-COTTA RELIEF FROM SARDES

WHILE the publication of the sculptured objects in stone and in terra-cotta, found in the course of the excavations at Sardes made in the years 1910 to 1914, must await further study for the verification of various details, it seems advisable to publish now a terra-cotta relief of unusual archaeological interest. This terra-cotta, which is illustrated on PLATE I, was unfortunately not unearthed in the actual excavations but was brought in by a small boy attached to the works, who had secured possession of it after its passage through several other hands.¹ Attempts to learn an approximate provenience of the object were without avail and, therefore, for the present, at least, it cannot be assigned to any particular area of the excavations. It is very probable that, in fact, the tile had long been removed from its original location for it has obviously been used for purposes other than those for which it was constructed, as the sculptured surface is much damaged by the remains of a coating of lime with which it was covered.

The terra-cotta is injured by a diagonal break on the right side and is broken at the bottom. At the top the original surface is, in part, preserved, and the upper left-hand corner of the inner paneling is apparently intact. Although the left edge is much worn it is, nevertheless, certain that we have here the original end of the tile because traces of paint are still visible. The length of the slab, as far as it is preserved, is 24 centimetres, the height is 13.5 centimetres, and the thickness at the top is 4 centimetres. It is divided by a vertical moulded ridge into two panels of which the left, which is preserved at the top to its full width of 16.6 centimetres, is decorated with a moulded relief representing a group of two figures in a combat scene. As the figure on the left has a human body with the conventionalized head and neck of a bull it is clear that the combat is between Theseus and the Minotaur.

¹ See H. C. Butler in *Sardis*, Vol. I, *The Excavations*, p. 78.

The two combatants stand erect, facing each other, in stiff archaic manner. The hero is on the right of the picture, facing to the left, with his head and body in full profile. The eye, in primitive fashion, is treated as if seen from the front, the nose is prominently long and the chin is beardless. The hair on the top of the head is apparently represented as closely cropped, or else the head is covered by a tight-fitting cap or helmet. Indeed the decorative bands visible about the brow seem rather more satisfactorily interpreted as ornamentation on a helmet than as a fillet encircling the head. Behind, the hair hangs down in a braid, terminating in a point on the shoulder. With his left hand Theseus has seized a horn of the bull-headed man standing rigidly opposite, while with his right hand he is thrusting a sword into the creature's breast. The right upper arm and elbow are awkwardly portrayed and reveal the artist's difficulty in suggesting the anatomy of parts of the body conceived as turned away from the spectator. The Minotaur has broad horns between which the ridge of the frontal bone is emphasized by an outline in black paint. It should be noticed that the protuberance on the left of the head, balancing the horn on the right that is held by Theseus, seems to be the second horn and not an ear. The thick bovine neck is represented in profile below which the upper part of the human body appears slightly turned to the spectator's left. The quasi human hair, which hangs in a heavy mass on the neck, is arranged in a waved or stepped style. The creature has raised his left arm and gripped the hand about the forearm of Theseus near the wrist, while the right arm hangs down with the fingers of the right hand extended, but the surface of the tile here is so badly worn that it is impossible to tell if anything was held in this hand, or what the purpose of the gesture is. Both figures are clad in a garment with a thick, noticeable girdle about the waist. The entire surface of the terra-cotta is covered with a slip of creamy white paint on which the moulded figures are outlined with a narrow black band. A similar band is also painted along the inner edge of each side of the panel, and the upper moulded border of the tile is ornamented with a series of black chevrons painted on the white ground.

The right panel of the tile is broken away with the exception of the upper left corner, where is seen the tip of a gracefully plumed wing. Through the fortunate preservation of this corner it is possible to restore completely and correctly, beyond any doubt,

this entire panel from a tile from Sardes that was acquired by the Louvre in 1906, and was published by M. Georges Radet in 1909, as the subject of a special monograph.¹ Radet gives, in pl. I of his work, an illustration of the Louvre relief, which is reproduced, on a smaller scale, by H. Koch in his 'Studien zu den Campanischen Dachterrakotten,' published in *Römische Mitteilungen*, XXX, 1915, p. 32, fig. 12. Because of the intimate relationship between the piece in the Louvre and the new relief the Louvre fragment is illustrated here on PLATE II from a new photograph, which was taken and sent to me through the kindness of M. Pottier. The photographs supplement each other as they were made with different light effects. The dimensions of the two tiles are similar, their material, technique and appearance are the same. Moreover the piece of wing that is preserved on the Sardes example was made from the identical mould on which the specimen in the Louvre was impressed. It is, therefore, possible safely to restore the new relief to the extent of the addition of the entire right panel with its representation of the winged Artemis, walking to the left while holding in each hand a lion by the tail. Such restoration would make the dimensions of the terra-cotta 24.5 centimetres high by 36 wide, figures that would agree with those conjectured by Radet (p. 2) for the full size of the tile which he studies. For Radet argues that the example in the Louvre probably comprised, in its complete form, only two panels, because if it were longer the width would be disproportionate to the height and the piece would have been much too fragile. This view, however, must now be revised since the discovery at Sardes of several complete architectural tiles of similar type, with figurative and geometrical decorations, which, with approximately the same thickness and height, have a length varying from 45 to 50 centimetres. In no case among the examples with metope-form arrangement found in the excavations does the end of the tile extend beyond the outer moulded border of the panel, as it appears in the Louvre fragment; and finally the difference between the finish of the left edge of the new tile, which is an original edge, and that of the left edge of the example published by Radet is sufficient to prove that the latter is due to a break. From these various considerations it seems to me to be practically certain that originally the complete tile, from different

¹ *Cybébé, étude sur les transformations plastiques d'un type divin*, Paris-Bordeaux, 1909.

replicas of which are derived the two fragments under discussion, consisted of three panels, of which that on the left represented Theseus and the Minotaur, while in the centre was the Persian Artemis and on the right an unknown subject. Although the lower part of the new tile is entirely broken away it is evident from the deep inner projection of the bottom of the Louvre fragment that these are pieces of a decorative sima, and it is probable, on the basis of analogous discoveries at Sardes and in Etruria, that the building on which they were used was constructed of perishable material, such as wood and sun-dried brick and, therefore, has wholly disappeared.¹

In his monograph on the relief in the Louvre Radet makes an exhaustive study of the ramifications of the type of the winged goddess here represented, and records on page 32 his conclusions in regard to the date of the relief, namely, that it belongs to the confines of the seventh and sixth centuries before Christ. On page 33 he further states that it cannot date earlier than the last quarter of the seventh or the first quarter of the sixth century. Koch, in the work cited above, page 32, approves the attribution of the product to the end of the seventh century. We may then provisionally accept this date as the starting point for our study of the age, style and artistic relationships of the scene depicted on the new relief.

The subject of the contest between Theseus and the Minotaur is fully discussed by H. Steuding in the article "Theseus," published in Roscher's *Lexikon* in 1919-1920, columns 678 ff.² As references to earlier discussions of this theme are here easily obtainable the present article will be limited to the phase of the subject with which the new illustration is immediately concerned, and in this connection various artistic representations of the combat must be considered, as follows:

1. Perhaps the earliest example occurs on a small thin gold plaque, found in a grave in Corinth and now in the Berlin Antiquarium. The figures were stamped on the gold, and the scene of the Theseus-Minotaur combat recurs on four complete examples and on one that is fragmentary. One of these plaques was published by Furtwängler in full size, in outline drawing, in

¹ Butler, *op. cit.* I, p. 76; E. Douglas Van Buren, *Figurative Terra-cotta Recrements in Etruria and Latium*, p. 35.

² A brief résumé, with selected references, is also given by Robert in Preller's *Griechische Mythologie*, 1921, Vol. II, part II, p. 679.

Archaeologische Zeitung, 1884, pl. 8, No. 3, and from this source is reproduced here as Fig. 1.¹ On this plaque the Minotaur is seen on the right of the picture, facing left, with his head and lower body in profile, but with the shoulders turned slightly to the front. With the left hand he has seized Theseus's sword, while the right is gripped about the hero's wrist in the attempt to loosen the hold on his horn. It will be observed that this motive is exactly similar to that occurring on the group from Sardes. Both figures also wear a thick girdle, and the profile of the faces of Theseus and of Ariadne, who stands behind him, is similar to the representation of the hero on the Lydian terra-cotta. The most notable characteristic of this gold ornament from Corinth is the stiff rigidity of the figures, which, as Steuding has pointed out in the work cited, col. 699, is reminiscent of the heraldic pose of similar groups in oriental art. The attribution of this work to the seventh century may be safely accepted.



FIGURE 1.—GOLD PLAQUE FROM CORINTH: BERLIN.

2. With the foregoing representation Furtwängler has associated a stamped relief that is found on one leg of a large basin, with three legs and two handles, in the Museo Municipale at Corneto-Tarquiniæ. Each leg is terminated by a lion's claw, above which is a quadrangular field with a stamped relief. On two of these reliefs is represented a centaur with a human body in front, while the third shows the group of Theseus, Minotaur and Ariadne. A view of this vase from the side on which the centaur is visible is given by Baur in *Centaur in Ancient Art*, pl. XV. A rough outline drawing of the Theseus-Minotaur group is published by Furtwängler in *Archaeologische Zeitung*, 1884, p. 107.² Furtwängler gives only the main contours of the

¹ Furtwängler's article and drawing were republished in his *Kleine Schriften*, I, pp. 458 ff., pl. 15, No. 3, and the same drawing is reproduced by Helbig in the article 'Minotauros' in Roscher's *Lexikon*, II, 2, col. 3007.

² Repeated in *Kleine Schriften*, I, p. 464. Compare Harrison and Verrall, *Mythology and Monuments of Ancient Athens*, p. cxxiv, fig. 28.

figures and remarks that this sketch must not be regarded as a publication of the relief. In the course of a recent visit to Corneto-Tarquiniia it was possible for me to take a brief glance at this object but I was not permitted by the Director of the Museum to make a sketch or to take a photograph of it. Therefore, in order to facilitate comparative study of the series under discussion, in lieu of a better illustration Furtwängler's drawing is here reproduced in Fig. 2. It must, however, be observed that this relief is very badly injured and some parts of the outline as given by Furtwängler are now impossible to distinguish. But the



FIGURE 2.—STAMPED RELIEF ON BOWL: CORNETO.

general pose of the figures is accurately reproduced and minor corrections may be easily made when a photograph is available for publication. It is quite clear on the original, for example, that Ariadne is holding the end of the clue in the right hand and that the left hand holds out her veil behind the back of Theseus, whose body does not bend so far forward as is here shown. The grouping of the figures in this case is similar to that on the Corinthian plaque,

but a slight development is here discernible in the greater vivacity of the representation of the figure of Theseus, who, in springing forward to the attack, raises his left leg with the happy result that space is thus made on the field for the inclusion of the coil of the clue of which the end is held by Ariadne. The left arm and hand of the Minotaur hang down in a gesture like that of the monster's right arm on the Sardes tile, and suggest the possibility that the creature may be holding a stone, as he commonly does on later portrayals of the scene on black-figured vases. This hand, however, is hopelessly injured on the original vase and thus the purpose of the gesture can only be conjectured, and it may be here remarked that in the scene described below under No. 9 of our series the monster is swinging down his arm with an empty hand.¹

¹ Compare the gesture of the Minotaur on the bronze relief from Perugia, *Antike Denkmäler*, II, pl. 15, No. 7.

Baur, *op. cit.* p. 112, dates the vase at Corneto in the early decades of the sixth century, but it surely cannot have been produced much after the beginning of the century.

3. An interesting representation of the Theseus-Minotaur combat occurs on a thin strip of bronze divided into "metopes" and decorated with stamped reliefs of the so-called "Argive-Corinthian" style, shown in our Fig. 3. This was found at Noicattaro near Bari, in the southeastern part of Italy; it is now in the Museum of Bari, and

has recently been published by Gervasio, the Director of that Museum.¹ The figures here also are stiff and rigid, but the hero, on the left, has forced the monster down on one knee by his grip on the horn, while thrusting the sword with his right arm. Both contestants have their hair arranged in the ridged manner, as has the



FIGURE 3.—PANEL OF BRONZE STRIP FROM NOICATTARO.

Minotaur on the Sardes relief, and the upper and lower parts of the bodies are in profile while the breast is shown in front view. Theseus wears a girdle such as we have already noticed to be characteristic of his costume on the example from Sardes, but the Minotaur is clad in a short chiton. The monster is holding a stone in his left hand and is raising toward Theseus the right hand with the fingers extended, somewhat as they appear on the lowered right hand of our terra-cotta. Gervasio, in his book, pages 159 to 271, makes a thorough and scholarly study of these "Argive-Corinthian" bronze strips, with the conclusion, stated on pages 262 ff., that their stylistic, decorative and mythological character points to a Corinthian origin. He very reasonably dates the example from Noicattaro at the end of the seventh or in the first years of the sixth century, pages 173 and 270.

¹ Michele Gervasio, *Bronzi arcaici e ceramica geometrica nel Museo di Bari*, 1921, pl. XVII, and p. 208, fig. 66.

4. With the bronze from Noicattaro must be associated the fragmentary bronze strips of similar type found on the Acropolis at Athens, on one of which is represented a somewhat similar group of Theseus and the Minotaur, listed by de Ridder, *Catalogue des bronzes trouvés sur l'Acropole d'Athènes*, p. 117, No. 351 B, and illustrated by Wolters in *Athenische Mitteilungen*, XX, 1895, pl. XIV, No. 5.

5. On a fragment of a bronze strip of similar style and technique, found at Aegina and published by Thiersch in Furtwängler's *Aegina*, pl. 113, No. 3, is shown another phase of the encounter, in which Theseus and the Minotaur are quite differently arranged, the hero in this instance being on the right of the group and the Minotaur on the left. The fact that this arrangement occurs on the Sardes tile, as well as on Nos. 10 and 11 listed below, invalidates Gervasio's note, *op. cit.* p. 223, that the original scheme requires Theseus on the left, as he is seen to better advantage from the right side while thrusting his sword.

6. Related to the bronze strips of the "Argive-Corinthian" type are the reliefs, sculptured on slabs of *nenfro*, found at Corneto-Tarquinia. The reliefs are similar to the bronzes in style, in their metope-form arrangement, and in the subjects treated. The combat of Theseus and the Minotaur appears on one of these slabs in the Archaeological Museum at Florence published by Pernier in *Notizie degli Scavi di Antichità*, 1907, p. 345, fig. 73a, from which our Fig. 4 is made. Here the Minotaur, with head turned back, is fleeing rapidly to the left, pursued by Theseus. The arrangement is thus different from any so far discussed, but this example is particularly interesting in connection with our study, because on another metope of the same slab, or of an adjoining slab, reproduced in Fig. 4 from Pernier, *op. cit.* fig. 73b, is represented a winged goddess, or demon, running to the right, whose body, from the waist up, is extraordinarily similar to the winged Artemis of Sardes, in the sweeping wings that grow from the breast and in the pose and profile of the head. Another winged figure of this type occupies a well-preserved panel on a second slab from Corneto,¹ and this figure also occurs, in very fragmentary form, on one of the bronze strips from Olympia.² Moreover as a similar figure, repeated on

¹ Milani, *Museo archeologico di Firenze*, II, pl. XCVII.

² *Olympia, Die Ergebnisse*, IV, *Die Bronzen*, taf. XXXIX, Nos. 699 and 699a.

several fragments in the Archaeological Museum at Florence, is carrying a bird by the hand it may be that a representation of Artemis is actually intended. The reliefs from Corneto seem to confirm Furtwängler's doubt, expressed in *Olympia, Die Bronzen*, p. 102, that the figure from Olympia represents a gorgon, in spite



FIGURE 4.—RELIEF FROM CORNETO: FLORENCE.

of the fact that a gorgon is certainly portrayed on a similar bronze from the Ptoian sanctuary.¹ The Corneto slabs are dated by Pernier between the middle of the seventh and the middle of the sixth century.²

7. A wide variation in the treatment of our theme occurs on a Corinthian bowl, dating from the seventh century, which is published by Furtwängler in the *Sammlung Somzée*, pp. 76 and 77 and pls. XLII and XLIII. The artist has given an original interpretation of the scene, for Theseus has thrown the beast to the ground and is plunging his sword through the neck of the Minotaur as he lies, resting on his left elbow and turning his raised head back toward the hero. The particular interest to our study is derived from the fact that this is another representation of the combat from Corinth in the seventh century.

¹ Holleaux in *Bulletin de Correspondance Hellénique*, XVI, 1892, p. 349 and pl. X.

² Compare also Milani, *Notizie degli Scavi*, 1892, p. 472.

8. The next interpretation of the subject appears on an extraordinary, almost unique, hydria, found in the "Isis grave" on the Polledrara estate at Vulci in Etruria (Fig. 5). Cecil Smith publishes this vase, with colored illustrations in the *Journal of Hellenic Studies*, XIV, 1894, pp. 206 ff., pls. VI and VII, as the chief and typical example of a new kind of pottery, which he calls from this hydria, "Polledrara ware."¹ From objects found in the same tomb this vase can be very exactly dated to about 600 B.C., but its original provenance and the source of its inspiration are quite unknown, its decorative motives being variously attributed to Caere, to Corinth, to Chalcis, to Naukratis, or in general to Ionia.² The combat of Theseus and the



FIGURE 5.—THESEUS AND MINOTAUR:
VASE FROM VULCI: BRITISH MUSEUM.

Minotaur appears on the upper of two frieze bands that decorate the shoulder and the body of the hydria. The group is conspicuously different from the preceding examples, and there is further development from the stiff, upright pose of the two combatants. Theseus holds the horn with his left hand and thrusts with the sword in the right, but the Minotaur has his knees bent

and is clearly trying to run to the right, his head appearing in front view so as fully to emphasize his bullish characteristics. Both Theseus and Minotaur are clad in short chitons, but Ariadne, behind Theseus, is wearing the long chiton and himation, and holds the clue in her right hand, just as she is represented on the Corneto bowl. Between Theseus and the Minotaur is a lotus bud and stem, which is used as a decorative space-filler here and elsewhere on the vase. As this form of decoration is cited as evidence of inspiration derived from Ionia,³ it may be of interest to show in Fig. 6 a fragment of a terra-cotta relief, found at Sardes, which has a very beautiful decorative motive consisting of a lotus blossom, similar to those on the Polledrara hydria, growing on a long bent stem which serves as a support for the

¹ See Pottier, *Catalogue des Vases antiques du Louvre*, II, pp. 378 ff.

² Baur, *op. cit.* p. 129. Walters, *History of Ancient Pottery*, II, pp. 297 ff.

³ Hugo Prinz, *Funde aus Naukratis*, *Klio*, Beiheft VII, 1908, p. 62.

forepaws of a lion. This terra-cotta will be further studied in connection with the other terra-cottas found at Sardes, and we need only note here that its date cannot be far from that of the Polledrara vase, and that the similarity of the decorative motive is striking.

9. Some variation of treatment is seen in the representation of the group on an early scyphus of Ionian type, now in the Louvre but formerly in the possession of M. Rayet, by whom it is published in *Gazette Archéologique*, IX, 1884, pp. 1 ff., pls. 1 and 2.¹

The part of this picture illustrating the combat is repeated in our Fig. 7. The Minotaur, of great size, is rushing from the right at Theseus, against whom he thrusts his right arm, swinging the left far out behind. The hero quietly meets the attack and seizes the monster's horn with one hand while piercing him in the

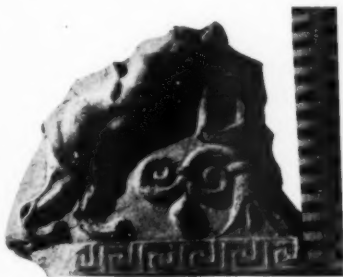


FIGURE 6.—TERRA-COTTA TILE FOUND AT SARDES.



FIGURE 7.—THESEUS AND MINOTAUR: VASE IN THE LOUVRE.

breast with the other in the usual manner. Ariadne, standing behind Theseus, is made of small stature so that she may fit conveniently into the restricted space below the handle of the cup.

¹ Discussed by Harrison and Verrall, *op. cit.* p. exxiv, and shown in fig. 27.

This vase is dated by Pottier at the beginning of the sixth century.¹

10. An interesting portrayal of the contest appears on an amphora from Vulci in the Bibliothèque Nationale at Paris, published by de Ridder, *Catalogue des Vases peints de la Bibliothèque Nationale*, I, No. 172, pp. 77 ff., fig. 4.² Here the Minotaur, on the extreme left of the group, is trying to flee to the left, but is held by Theseus, who is gripping the horn with his left hand while preparing to strike with the sword in the right. The head and legs of Theseus are shown in profile, but the upper part of the body is seen from the back. Behind Theseus, apparently, is Hermes with the *kerykeion*, who is followed by an old man with white hair and beard. This amphora is one of a group of vases studied by Dümmler in *Römische Mitteilungen*, II, 1887, pp. 171 ff. Although all these vases have been found in Etruria, Dümmler thinks that they were made in the region of Pontus, and, therefore, in accord with his theory, and for want of a better name, they are usually called "Pontic" vases. While the Pontic origin of this ware is unlikely, it seems probable that these vases were either made in Asia Minor, or by Ionian artists who were settled in Etruria.³ Endt, *Beiträge zur Ionischen Vasenmalerei*, p. 69, assigns this ware to the end of the seventh and the beginning of the sixth century B.C. Furtwängler and Walters place the vases in the first half of the sixth century.

11. The last representation of the theme that has a place in this series is found engraved on a gem from Cyprus (Fig. 8) of which a drawing is reproduced, with a brief description, by Pierides in the *Journal of Hellenic Studies*, XVI, 1896, p. 272. Furtwängler republishes this drawing in *Die antiken Gemmen*, III, p. 99, fig. 67, and calls the object "älterarchaisch," a term that might apply to any time anterior to the middle of the sixth century. Professor John L. Myres has kindly written to me that, on the basis of the sketch in the *Journal of Hellenic Studies*, he is inclined to date the gem in the middle of the seventh century. Although the name, Divaithemis, appears on this gem and also

¹ In Daremberg et Saglio, *Dictionnaire des Antiquités*, s.v. 'Labyrinthus,' III, 2, p. 883.

² Dumont and Chaplain, *Les Céramiques de la Grèce propre*, I, p. 271, No. 3.

³ Walters *op. cit.* I, p. 359. Furtwängler, *Die antiken Gemmen*, III, pp. 88 ff.

on a fragment of a silver bowl from the "treasure of Kurion,"¹ the nature of the treasure is too uncertain to furnish any basis for chronological deductions, even assuming that both names refer to the same individual. But while the greater vivacity of the participants in the scene on the Cypriote gem suggests a more developed style and a later date than that to which belong several of the examples previously discussed, the general appearance of the figures and the arrangement of the group resemble others in our series, and argue for its assignment to approximately the same period, that is, to about the end of the seventh century B.C. On the gem the hair of the



FIGURE 8.—GEM FROM CYPRUS.

Minotaur is dressed in the ridged manner, while that of the hero hangs loosely behind; but the most noticeable fact about this group is that, in contradistinction to the usual manner of grouping, here again the Minotaur is placed on the left of the picture, in a similar arrangement to that observed on the terra-cotta from Sardes.

This list comprises the artistic interpretations of the Theseus-Minotaur combat that may be dated within a reasonably restricted period of time at the end of the seventh and the beginning of the sixth century B.C. Where, then, in the early representations of this myth should the terra-cotta from Sardes be placed? In the stiffness and rigidity of the pose of the figures it approximates more closely the type of the plaque from Corinth. In these two examples, also, the Minotaur is made somewhat smaller than the hero, and the curious long projecting nose is prominent on each profile of Theseus, as well as on the Ariadne of the gold stamp. This profile is not very different from that of the man who is slaying a lion on a relief from Xanthus in the British Museum, which, for plausible reasons, is dated in the seventh century by Poulsen, *Der Orient und die frühgriechische Kunst*, p. 152.² One of Poulsen's chief arguments for deter-

¹ L. P. Di Cesnola, *Atlas of Cypriote Antiquities in the Metropolitan Museum of Art*, III b, Supplement: Cypriote Inscriptions, No. 1.

² The relief is illustrated by Poulsen from a photograph in the work cited, p. 151, fig. 179.

mining the age of this, as well as other monuments, is based on the manner of treating the hair, and this criterion may be profitably applied to the terra-cotta from Sardes. A monument of transitional style between the seventh and sixth centuries is a stamped bronze band of reliefs, found at Delphi, and published in *Fouilles de Delphes*, V, pl. XXI.¹ Poulsen, *op. cit.* p. 154, cites this bronze as an example of development from the early style of dressing the hair in the "ridged-wig" manner (*Etagen-perücke*) to the custom of fastening it behind on the neck (*der im Nacken zusammengebundene Schopf*), which does not occur before the beginning of the sixth century. On one of the reliefs of the Delphian bronze Cassandra is represented with hair arranged in the earlier style, while on another panel is a seated figure of Zeus, the arrangement of whose hair is interpreted by Poulsen in the manner just described. Moreover on a similar bronze strip from the Acropolis at Athens, listed above as No. 4 in our series of representations of the Theseus-Minotaur combat, the hair of the men is arranged in braids, while that of the sphinxes is dressed in the ridged style.² This is the very phenomenon that has been noted as characteristic of the different type of head-dress worn by Theseus and by the Minotaur of the group from Sardes. In view, therefore, of the resemblance in this particular, it is interesting to recall other points of relationship between the terra-cottas from Sardes and the "Argive-Corinthian" bronze strips. The composition of the groups in each case is arranged in the form of a metope. Winged sphinxes, winged demons, and animals occur in association with groups representing mythological scenes. The combat of Theseus and the Minotaur is one of the subjects regularly represented, occurring on examples from Noicattaro, Aegina, Athens, and on the slab from Corneto-Tarquiniæ. The winged female that is preserved on the bronze from Olympia and on the Corneto slab is in some respects very similar to the winged goddess from Sardes,³ and finally the heraldic lions, preserved in fragmentary form on a terra-cotta from Sardes, shown in Fig. 6 above, is a motive that recurs on the bronzes, being found on the reliefs from the Acropolis,⁴ from

¹ See also Homolle, *Revue de l'Art Ancien et Moderne*, XV, 1904, I, p. 18.

² Cited by Poulsen, *op. cit.* p. 154, from *Ath. Mitt.* XX, 1895, pl. XIV.

³ Compare also the winged male figure, holding water birds, on a bronze strip from the Acropolis, *J.H.S.* XIII, 1892-93, p. 259, fig. 26.

⁴ *Ath. Mitt.* XX, 1895, pl. XIV, No. 2.

Noicattaro,¹ and, perhaps, on a fragment from the Ptoian sanctuary.² Thus from a comparative study of our relief in its relation to other interpretations of the same myth, and in view of the style and technique of its execution we are brought to the conclusion in regard to date that was reached by Radet in his study of the related tile, namely, that it was produced close to the beginning of the sixth century B.C.

It has previously been suggested that the tile from Sardes, when complete, had probably consisted of three panels, two of which were decorated with the groups that have been described. Unfortunately in the reconstruction of the entire original tile there is still a sad lacuna, owing to the fact that only a small part of the right panel of the example in the Louvre is preserved. On the piece remaining are visible a human foot and lower leg, and the end of an arm, holding a bow with a fixed arrow. The foot is placed close to the edge of the panel and, therefore, if the space is to be at all adequately filled, one figure must have been represented in a very long stride, or else there must have been a group of figures. Radet decides in favor of a single figure, *op. cit.* p. 4 and 33 f., and identifies the bowman with Heracles. Koch, *op. cit.* p. 32, thinks it is more probable that there were two figures. It is obvious that a single figure in the panel would not have been placed so close to the left edge. If, on the other hand, a group of two figures had been represented it would be more reasonable to expect that they would face each other as they do on the new relief. As, therefore, neither of these solutions is satisfactory it may be permissible to offer a new suggestion. It is well known that the winged Artemis is often associated with centaurs, as she appears on the gold plaques from Camirus in Rhodes,³ in Etruria,⁴ in Ionia,⁵ on monuments from

¹ Gervasio, *op. cit.* pl. XVII.

² B.C.H. XVI, 1892, pl. X.

³ Marshall, *Cat. Jewel. Br. Mus.* pl. XI; Baur *op. cit.* p. 88, No. 221.

⁴ Micali, *Stor. ant. pop. Ital.*, III, pl. XX, 1; Valeriani, *Etrus. Mus. Chius.* I, pl. LII; Furtwängler, *Vasensammlung*, p. 178, No. 1550; Baur, *op. cit.* p. 113, No. 283. Furtwängler, followed by Baur, confuses the stamp on the goblet in Berlin with that shown by Micali, which is on an amphora now in the Museo Civico at Chiusi, No. 1435. The relief at Chiusi is distinguished by the lily-like plants growing from the ground and by stars between the legs of the man behind the chimaera, and between him and Artemis. The relief illustrated by Valeriani is in the Museo Archeologico at Florence. It is recognizable by the way in which the tail of the chimaera is coiled around the staff of the youth who follows.

⁵ For example, on Clazomenian sarcophagi.

South Russia¹ and elsewhere. But the centaur, in turn, is also associated with three of the early representations of the Theseus-Minotaur combat; for a series of centaurs appears on a gold band from the same grave in Corinth, where was found the plaque with the scene listed above as No. 1; centaurs occur on two of the three legs of the bowl in Corneto, in connection with No. 2 in our list; and centaurs immediately adjoin the Theseus-Minotaur group on the Polledrara hydria, our No. 8. They are also found on a vase of "Pontic" type from Vulci, exactly similar in style to that on which our No. 10 is painted;² and, moreover, on the Amyclaeon throne the representation of Theseus slaying the Minotaur adjoins that of Heracles pursuing a centaur,³ as, in fact, the winged Artemis does on the famous bronze relief from Olympia.⁴ And on a large slab of *nenfro* from Corneto, in the Archaeological Museum at Florence, of the type listed above as No. 6, a winged goddess of the Artemis type occupies a metope directly above a relief showing the Heracles-centaur combat.⁵ Finally it should further be noted that a centaur occurs on another of the bronze strips from Olympia,⁶ as well as on a similar bronze plaque found at Dodona,⁷ and occupies a panel of another *nenfro* slab from Corneto.⁸ Therefore the restoration of the figure in the right panel of the tile in the Louvre as a centaur, with human forelegs, of the Ionian type, would satisfactorily fill the space available, and would bring into juxtaposition evidently related themes. No centaur of this type, carrying a bow, is known to me, but the centaurs were famous hunters of both small and large game,⁹ and as such would obviously make use of the bow as well as other arms. In fact we are told that in the abode of Chiron, teacher of the art of hunting to many

¹ Minns, *Scythians and Greeks*, p. 222, cites *Arch. Anz.* 1905, p. 57. The Artemis is shown by Radet, *op. cit.* pp. 19 and 20, but I do not know that an illustration of the centaur has been anywhere published.

² Dumont and Chaplain, *op. cit.* I, p. 271, No. 4; Endt, *op. cit.* p. 39, No. VII; Dümmler, *op. cit.* p. 173, No. VI.

³ Pausanias, III, 18, 16.

⁴ *Olympia, Die Ergebnisse*, IV, *Die Bronzen*, pl. XXXVIII.

⁵ Milani, *Museo Archeologico di Firenze*, I, p. 245, and II, pl. XCVII.

⁶ *Op. cit.* p. 105.

⁷ Carapanos, *Dodone*, pl. XIX.

⁸ Baur, *op. cit.* p. 129, No. 317, pl. XII. This slab is now located in the Museo Municipale at Corneto.

⁹ Colvin, *J.H.S.* I, p. 123.

heroes,¹ by way of contrast to the warlike weapons of his companions, are *pharetrae insontes* and the skins of wild beasts.² In eastern art the centaur appears with a bow on a clay tablet of the Cassite period, shown by Baur in his work cited, page 3, fig. 2, on a Cassite boundary stone in the British Museum,³ and on a boundary stone found at Susa.⁴ A bow with a fixed arrow is also carried by animals of the centaur type, with a wing in the shape of a fish growing from the back, that constitute the decoration on a gold sheath found in South Russia.⁵ The suggested restoration of the decoration of the missing panel of the tile from Sardes cannot be proved, and it is greatly to be desired that good fortune may cause a replica, with this part intact, to be turned up in the course of future excavations on the site.

In connection with the determination for Lydia of an early representation of the Theseus-Minotaur combat it is interesting to note that of the eleven examples of the theme, which have been discussed here as being especially related in age and type, four were found in Etruria, three are on so-called Argive-Corinthian bronze strips, two are from Corinth, one of Ionian style was acquired in Greece, and one was found in Cyprus. Such a characteristic distribution as is here indicated would argue for a common origin, and the clue to that origin is furnished by the new terracotta. In the time of the Mermnad dynasty, 687 to 546 B.C., the Lydian empire was supreme in Asia Minor, and was in intimate relationship with many Greek cities, especially Corinth and Sparta. The position of Sardes as a cosmopolitan centre during this period is well portrayed by Radet, in his work that has been frequently cited, pp. 42 ff., with the quotation of the various appropriate literary references. To this source he traces the starting point for the diffusion of the type of the *πόρνια θηρῶν*, popularized through the Ionians as intermediaries, with their affiliations extending from the Caucasus to the Pillars of Heracles, and in particular favor with the Etruscans.⁶ The same reasoning applies admirably to the theme of Theseus and the Minotaur, and in fact the origin of this myth has been placed in Asia Minor

¹ Xenophon, *Cyneg.* I, 2.

² Statius, *Achilleis*, I, 115.

³ Perrot-Chipiez, *Histoire de l'Art dans l'Antiquité*, III, p. 604, fig. 412.

⁴ Baur, *op. cit.* p. 2.

⁵ Reproduced by Poulsen, *op. cit.* p. 71, fig. 73.

⁶ On Ionian elements in Corinthian art see Gervasio, *op. cit.* pp. 266 ff.

by P. Friedländer, *Herakles*, pp. 172 ff.¹ The early representation of the scene found in Lydia will add the crowning touch to Friedländer's arguments. In spite of the later localization of this myth in Crete it is very significant that none of the archaic examples here discussed has any relation with that island, and that, in general, no early representations have been found there. This fact would accord with the views of Bethe that originally Theseus had no affiliations with Crete,² and, indeed, Farnell directly states that he must be regarded "as essentially an Ionian hero."³ It seems also to be true that the Minotaur, at least of the type that pertains to our discussion, that is, the type of the human body with the head and neck of a bull, does not occur in the early Cretan discoveries.⁴ Strange monsters, however, with human and bovine characteristics intermingled, are found on gems from Cnossus,⁵ and on clay sealings from Zakro,⁶ and although these creatures have no relation to the type of the Minotaur of the seventh and sixth centuries that appears on the monuments listed above, they, nevertheless, also look to the east for their origins in Babylonian and Assyrian art.⁷ There is, further, a direct reference of the Minotaur legend to Lydia in the much discussed derivation of the word, labyrinth, from the Lydian word, *labrys*, for the Greek, *πέλεκυς*, the double-edged axe.⁸ Moreover this double axe, found everywhere in Crete, and at the same time the sacred symbol of the kings of Lydia,⁹ is the favorite weapon of Theseus, who is commonly represented on the vase paintings as meeting his foes with it in his hand. As the same weapon is sacred among the Hittites, being carried by a god

¹ *Philologische Untersuchungen*, XIX, 1907.

² *Rheinisches Museum*, LXV, 1910, p. 224.

³ *Greek Hero Cults and Ideas of Immortality*, p. 338.

⁴ Compare Furtwängler, *Die antiken Gemmen*, III, pp. 42 and 100.

⁵ Evans in *Brit. School Ann.* VII, 1900-1901, p. 19, fig. 7 b and 7 c. Also Evans, *The Palace of Minos*, I, p. 358, fig. 260.

⁶ Hogarth, *Brit. School Ann.* VII, 1900-1901, p. 133, fig. 45. *J.H.S.* XXII, 1902, p. 79, pl. VI, Nos. 17, 18, 19. Compare Evans, *The Palace of Minos*, I, p. 68, fig. 38 a.

⁷ Tittel, *Neue Jahrbücher*, XI, 1903, p. 403. Poulsen, *op. cit.* pp. 74 ff. argues for the Hittite origin of various motives that occur in Cretan art. Compare also Baur, *op. cit.* p. 88.

⁸ Evans in *J.H.S.* XXI, 1901, p. 109, and the references given there in notes 6 and 7. Compare also Evans, *The Palace of Minos*, I, p. 6. Bethe *op. cit.* LXV, 1910, p. 226, note 1.

⁹ Plutarch, *Quaest. Gr.* 45.

in the religious procession, carved on the rocks at Iasilykaia, near Boghazkeui,¹ its presence in Lydia would naturally be traced back to that origin.² Theseus is surely intimately associated with Asia Minor, as he is called the founder of Smyrna,³ and settler of the region beneath Sipylus,⁴ and it may not be purely accidental that he appears, engaged in one of his adventures, on one side of a famous amphora in the Louvre, which is decorated on the other side by a picture of Croesus seated on the pyre.⁵

But although the appearances in art of the Theseus-Minotaur combat lead us back to Asia Minor for their inspiration it is certain that the origin of this myth must be sought in times antedating the period of Lydian hegemony in Asia Minor, and in lands to the east. Just as the female deity, *πέρνια θηρῶν*, later the great goddess of Lydia, appears in the



FIGURE 9.—SEAL IN BRITISH MUSEUM.

second millennium B.C. among the Hittites and the Babylonians, both with and without wings,⁶ so the idea of a bull-headed man is common in the east, and the theme of the conflict between such a monster and a human being is current there in very early times. A Hittite seal in the British Museum, published by Ward, *Seal Cylinders of Western Asia*, No. 869, reproduced in our Fig. 9, shows side by side two bull-headed men, which are of the very type that appears in early representations in the west; and more-

¹ Garstang, *The Land of the Hittites*, p. 214, pl. LXV.

² See Poulsen, *op. cit.* p. 75.

³ References given by Steuding, Roscher's *Lexikon*, s.v. 'Theseus,' IV, 2, col. 750.

⁴ Aristides, I, 20, p. 425 (Dindorf).

⁵ *Monumenti dell' Instituto*, I, pls. LIV-LV. Reinach, *Repertoire des vases peints*, I, pp. 85 to 87. Furtwängler and Reichhold, *Griechische Vasenmalerei*, II, pl. 113.

⁶ At Iasilykaia, Garstang, *op. cit.* pl. LXV, p. 214. She is represented in a Hittite bronze statuette shown in *Liverpool Annals of Archaeology*, IV, pl. XX, p. 88; and on seal cylinders published by Ward, *Seal Cylinders of Western Asia*, p. 297, No. 922 and 940. Compare also Ward's Nos. 896, 951 and 964. See further in this connection Prinz, *Athen. Mitt.* XXXV, 1910, p. 174 and notes.

over on a cylinder, Fig. 10, also in the British Museum,¹ is seen a combat between two men, or gods, and a monster with horns, of which the man on the left and the monster are similar in appearance and arrangement to the group of Theseus and the



FIGURE 10.—SEAL IN BRITISH MUSEUM.

Minotaur painted on the Polledrara hydria. The Hittite domination of Asia Minor in the second millennium, B.C., implanted firmly on the land and the people these motives of religion, mythology, and art, which subsequently were spread broadcast throughout the Mediterranean world, especially by the agency of the great Lydian nation, which had constant and intimate intercourse with the peoples farther west. The presence, then, of an illustration of the Theseus-Minotaur myth on a seventh to sixth century monument at Sardes is of unusual historical interest, as furnishing evidence of the rôle played by Lydia as intermediary between the east and the west, inheriting customs and traditions from the Hittites and bequeathing them to the Ionians and the Etruscans.

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¹ Ward, *op. cit.* p. 212, No. 644.

CORINTH IN PREHISTORIC TIMES

DR. BLEGEN'S important article under the above heading (*A.J.A.* XXIV, 1920, pp. 1 ff.) has only just been brought to my notice. I have to thank him for courteously sending me a copy of it through Mr. Wace. I only regret that I had not been told of it before; the first mention I heard of it was in August 1922, from an American friend. Had I been aware of its existence, I should, of course, have noticed it when reviewing in the *Classical Review* for last May Mr. Allen's book on the Catalogue. As it is, I must ask permission to make a tardy reply; and must apologise at the same time for the necessity of repeating something of what I wrote in the review I have mentioned. I was then only in possession of what had been published by Mr. Allen through Mr. Wace, with some little further information from Mr. Wace himself. It is a satisfaction to have at first hand Dr. Blegen's own statement, and to find that it is in all main points in accordance with the private report which, by the courtesy of the American School, had been sent to England by Mr. Wace. It is a great satisfaction to me to congratulate the American School on the splendid results of their researches.

It was naturally with some trepidation and surprise that I read in Dr. Blegen's first lines of the "speedy refutation" which my theory of the abandonment of prehistoric Corinth in the Mycenaean age had met with at the hands of the American archaeologists; and it was with relief that I realised that Dr. Blegen had not grasped my theory, and that any refutation could only apply to some theory which existed in his imagination only, and which had never been supported by me. My thesis is, of course, if incorrect, susceptible of easy and conclusive refutation, but in one way only—by bringing evidence from Corinth to shew that it was inhabited in Mycenaean days. But all the evidence that Dr. Blegen produces on this crucial point is comprised in the words: "It is a noteworthy fact that no Mycenaean pottery—or at any rate only an insignificant number of sherds—has yet come to light at this site." Plainly this is not refutation,

but confirmation of the thesis; and it is literally all that Dr. Blegen brings in the way of direct evidence.

When he speaks of "refutation" it appears that he supposes me to have maintained that there was no prehistoric site either at Corinth or in the neighbourhood. If I had said anything so foolish, naturally the refutation would have been complete. It is probably sufficient to point out that I not only quoted in my book the evidence of Dr. Rufus Richardson for prehistoric Corinth (*Homer and History*, p. 213) but added an Appendix G, on "Corinth in the Chalcolithic Age." And as for the district, instead of denying the existence of prehistoric sites, I indicated that there must be one to be discovered, representing the Ephyra which, as I conjectured, lay not far from Corinth towards Sicyon.

But perhaps Dr. Blegen may urge that, though he certainly has not refuted my thesis, he has done something short of refutation—that he has brought indirect evidence tending not indeed to prove or disprove, but to confirm or weaken my position. And this indeed he has done in a very striking way, which is worth a little attention.

The weak point about my argument was, of course, that the evidence from Corinth was purely negative. It might be fairly argued that, although there was no evidence to shew the existence of Mycenaean Corinth, yet, as it had been for a long time an inhabited place, it was unlikely that it should have gone out of existence just in the flourishing age of Mycenaean culture; it was more probable that the evidence for the Mycenaean settlement had accidentally perished than that the settlement itself had come to an end. But that argument can no longer be used. Corinth is no longer an isolated instance of a settlement which, after long existence, came to an end in Mycenaean times. What Dr. Blegen has proved is that it was the rule for settlements in the neighbourhood of Corinth, after long occupation, to be deserted in Mycenaean times; and, therefore, in the absence of direct evidence, analogy leads us to the same conclusion for Corinth itself. My thesis has received strong confirmation from Dr. Blegen's evidence—much stronger than I could possibly have expected. The burden of proof is now more than ever on the shoulders of those who assert that Corinth was inhabited in the days of the Atridae.

There are one or two points in which the evidence given by Dr. Blegen is not so explicit as one could wish; I call attention

to them because they seem to indicate the same inability to appreciate the point at issue.

In the first place I should like to ask whether there is any evidence that prehistoric Corinth was at any time an important settlement—important, I mean, as compared with those in the neighbourhood? Is there in particular any evidence that it was ever more than an unfortified village, one of those which it appears were scattered over the plain in Early and Middle Helladic days? All I can find on this point in Dr. Blegen's paper is that at his site 2 "a line of massive stones . . . may belong to a prehistoric wall." This, however, he does not seem to claim as the real and genuine Corinth. But does even this site entirely outrange, let us say, Korakou in importance? Is there any evidence whatever that prehistoric Corinth was a centre of population as it was in historic times?

Next, I must, in my ignorance, ask for some explanation of some of the terms used in his paper by Dr. Blegen. He refers to the paper in *B.S.A.* XXII, pp. 175 ff., 'The Pre-Mycenaean Pottery of the Mainland.' On turning to this paper I am at once struck by the fact that the word "Mycenaean" is conspicuously absent from the classification on p. 187. On p. 176, indeed, I find that "Late Helladic" is "that characterised by Mycenaean ware." In the table "Late Helladic" is correlated with Late Minoan I, II and III, and the word Mycenaean occurs only in the final sentence against L. M. III, "Period of widest diffusion of Mycenaean Pottery." It would seem, therefore, that Mycenaean is regarded as identical with Late Helladic, and covers all three periods of Late Minoan. But yet we find that "the tabulation" is a "summary of the chronological evidence at present available for the pre-Mycenaean history of the mainland," as, indeed, the title would indicate. This might lead us to think that the Mycenaean period came after the Late Helladic.

But Dr. Blegen does not in practice, so far as I can ascertain, follow either of these schemes. Sometimes he speaks of "Mycenaean" pottery, sometimes of "Late Helladic"; once at least, at Korakou, we find that "in the Late Helladic Period Mycenaean pottery is predominant." From this it would appear that Mycenaean indicates a part of Late Helladic; but which part of it there is nothing to shew. It would seem that Dr. Blegen and Mr. Wace, while introducing a new terminology, have not properly correlated it with the older. And this happens to be vital to Dr.

Blegen's argument on this particular point. When he says of any particular site that it shews "Late Helladic" ware, does he mean that it includes ware of the third period corresponding to L. M. III or not? If it does, he clearly ought to say so; if not, then the evidence is irrelevant.

For when I speak of Corinth being abandoned in the "Mycenaean" period, I mean distinctly the latest period, that immediately preceding geometrical pottery, in short the age which is correlated with L. M. III. It is this alone which, if I am right—and I believe that here scholars generally are in accord—can be regarded as the Achaean period; the age which Messrs. Blegen and Wace speak of as the Silver Age of Mycenae. So that the mere name "Late Helladic" means nothing to the purpose if it implies only "Grey and Yellow Minyan" or "Ephyraean," etc. And Dr. Blegen is drawing conclusions which are not justified by the evidence as he states it when he asserts that "six at least" of the prehistoric settlements "continued to exist until Late Helladic civilisation was blotted out by the Dorian invasion." He only adduces Mycenaean evidence from three (Nos. 5, 6, 9—"a few Mycenaean potsherds"); in the others only Late Helladic is quoted (2, 3, 8). The new terminology, I fear, seems less susceptible of exactitude than the old, and Late Helladic must be divided into sub-periods, like Minoan, before it can be regarded as sufficiently exact for scientific purposes. Meanwhile I should, on the face of it, be perfectly justified, since the argument turns upon "Mycenean," in assuming that where Mycenaean ware is not quoted none has been found. But I do not do this; I am quite content with the evidence as it is. It is clear that at other points as well as at Corinth there was a marked falling off in population up to the Late Helladic period, and that analogy, therefore, is in favour of the thesis that the same falling off occurred on the site of the later Corinth; we are justified, so far as evidence goes, in saying that there was no Corinth in Mycenaean, or if Dr. Blegen prefers, in Late Helladic days. The latter statement is, however, more than I originally asserted, and for the purposes of *Homer and History* is unnecessary. I wonder why there should be so strong a desire to believe in a Mycenaean Corinth for which the evidence is absolutely non-existent? It hardly seems to display a scientific spirit.

In another point Dr. Blegen has gone even further astray. If he had done me the honour of reading what I wrote, he could

hardly have said that the Ephyra with which I dealt was "an entirely hypothetical site on a more or less hypothetical river in Sicyonian territory," and still less could he have spoken of the discovery "not of one possible Ephyra but of a really embarrassing number of claimants to the title." A quite cursory acquaintance with the subject would have shewn that I was interpreting what Strabo said about the site of Ephyra, a site which plainly was known to him: ἔστι δὲ καὶ περὶ Σικυῶνα Σελλήεις ποταμός καὶ Ἐφύρα πλησίον κώμῃ, VIII, 3, 5. This is only "hypothetical" if we suppose that Strabo is imagining; it is at all events no hypothesis of mine. And the river itself is only hypothetical in so far as we are not quite sure which of the rivers "near Sicyon" it was. Whether it was near the mouth or the source of the river is not stated, and here again one could only guess. But where is the "embarrassing number of claimants" of which Dr. Blegen speaks, of sites lying on a river περὶ Σικυῶνα? There does happen to be one, and only one; and a very strong claimant it is.

Clearly Dr. Blegen has never referred to the Map of Homeric Greece which I appended to *Homer and History*; it would no doubt have been hardly reasonable to expect him to extend his researches so far. Had he done so, he might have noticed that the "entirely hypothetical site on the more or less hypothetical river" had taken in my mind a definite form, and that I had ventured to locate Strabo's Ephyra in the valley immediately west of Corinth now called the Longopotamos, just at the point where the mountains descend to the plain of Sicyon. It was, of course, a conjecture, and I wrote, with due caution, "Ephyre?" But it was a prophecy, and it has received, thanks to the American School, a signal and striking fulfillment. For just at the point where I placed "Ephyre?" stands the citadel of Aetopetra, Dr. Blegen's No. 3. Mr. Wace reported it as "about forty-five minutes westward in the valley of the Longopotamos guarding the road from Cleonae to Corinth, a fine acropolis justifying its name Aetopetra, Eagle's Rock." From further reports, and from Dr. Blegen's sketch-map, it appears to lie a little off the main valley, but as Mr. Wace speaks of it as in the Longopotamos valley, the same latitude may be claimed for Homer. Note that Strabo puts Ephyra "near", not "on" the river; so it would seem that I was right in divining that the Longopotamos is the Selleis. The little circle representing the position of Ephyra on the map is on the right bank of the river; and as, on the small scale, it is over half a mile

in diameter, I fancy it must cover the actual site. Still even if I am a mile out I cannot help thinking that my prophecy has come near enough to exact fulfillment to give some confirmation to my methods. If Dr. Blegen had taken a little more pains to understand I hardly think he would have scoffed at conclusions which are at all events based on the evidence as we have it, even if they have the misfortune not to agree with some of his prejudices.

With regard to the climate of the plateau of the isthmus I can leave Dr. Blegen to settle his account with Philippson. It is, of course, in no way essential to my argument. The fact is certain that population does at times tend to the shore of the Gulf of Corinth away from the plateau. That is the case at the present day; it was the case in the days of the Atridae, as has been shewn by Dr. Blegen; for it seems that in Mycenaean times Korakou held the position now occupied by New Corinth. I gave an economical reason for this, which has not so far been supplanted by any other, and as collateral to this explanation I adduced the testimony of Philippson. If he is wrong, and the amenities of the central plateau are such as to tempt population thither—though I do not know if Dr. Blegen would go as far as this—then force is added to the economical explanation, until some other is adduced. But the fact remains that at the present moment population avoids the delicious climate of Old Corinth and prefers the seaside. How does Dr. Blegen account for this?

WALTER LEAF.

LONDON,
October 1922.

DR. BLEGEN'S REPLY

I REGRET that I have failed to make clear my use of terms and, therefore, gratefully accept the present opportunity to explain them.

By Late Helladic civilization I mean that civilization which, under powerful Minoan influence, was dominant on the mainland of Greece from approximately 1600 B.C. until some time in the twelfth century, and which is best known and best illustrated from the wonderful discoveries of Schliemann and Tsountas at Mycenae, and more recently from the excavations conducted at the same place by the British School in Athens. In other words,

I use Late Helladic and Mycenaean as synonymous terms. Mr. Wace and I have introduced the name Late Helladic in order to indicate more clearly that this civilization, extending from Thes-saly to Southern Laconia and from Thoricus to Pylos, was by no means confined to Mycenae, but occupied the whole of the main-land of later Hellas.

This Late Helladic, or Mycenaean, civilization falls into three main stages which we have called respectively Late Helladic I, II, and III. Late Helladic I is the "Golden Age" of Mycenae that produced the rich treasures of the royal shaft graves. In Late Helladic II the same tradition is continued, but the apogee is reached and passed and we see the beginning of artistic decline. In Late Helladic III comes the "Silver Age" of Mycenae, when, though artistic feeling and achievement have sadly fallen, material prosperity and power reach their highest point and Late Helladic civilization attains its widest diffusion throughout the Mediter-ranean basin.

Late Helladic I may be dated approximately from 1600 to 1500 B.C., Late Helladic II from 1500 to shortly before 1400, and Late Helladic III from this same date to the cataclysm by which at some time in the twelfth century the civilization of the Eastern Mediterranean was overwhelmed, and which has usually been called the Dorian invasion.

Corresponding to these stages of Late Helladic civilization three clearly marked stratified layers have been found and three characteristic styles of Late Helladic or Mycenaean pottery. The evidence for this triple division has been presented in detail in the account of the excavations at Korakou and need not be repeated here. So much for terminology.

Dr. Leaf states (*Homer and History*, p. 217) that if Strabo is right ¹ Ephyra, the original Corinth, must have lain on the river Selleis in Sicyonian territory. He continues: "There is no im-probability in such an idea; indeed it almost seems to follow of it-

¹ Since some importance is attached to this passage from Strabo it may be worth while to quote it practically in full. Strabo VIII, 3, 5. (My own trans-lation):

"Between Chelonatas and Cyllene issue the Peneus River and also the Selleis, mentioned by the poet, which flows down from Pholoe. On this river is a city Ephyra, distinct from the Thesprotian, the Thessalian, and the Co-rinthian, being a fourth of the same name, situated on the road to Lasion. It is either identical with Boionoa (for so they used to call Oinoe) or near the lat-ter, distant 120 stades from Elis. From this town the mother of Heracles' son

self from the proof that in Achaian times the town of Corinth did not exist. The nearest inhabited place must have been the adjacent and fertile plain of Sikyon; . . ." Dr. Leaf supports this statement by the assertion that the region of Corinth is stony and arid and unattractive to settlement, and even maintains that "there could be no better type of barrenness and desolation." He thinks the climatic conditions so severe as to drive away even the most determined settler, and thus concludes that in "Achaian" days there was a complete abandonment of the district. The recently discovered archaeological evidence indicates quite the contrary. In the immediate neighborhood of Corinth on the

Tlepolemus seems to have got her name. For Heracles' campaigns were probably directed against this place:

'He carried her off from Ephyra on the Selleis River;'
since there is no river Selleis by those other towns called Ephyra. And from this town came also the corselet of Megeas,

'which Phyleus once brought from Ephyra on the Selleis River.'

Then follow quotations from Homer concerning Odysseus' visit to Ephyra to obtain poison with which to tip his arrows (*Od. I*, 261 f.), the suitors' conjecture that Telemachus is going to Ephyra for the same purpose (*Od. II*, 328 f.), and Nestor's account of the daughter of Augeas, said to be skilled in poisons (*Il. XI*, 738 ff.). Our text then continues:

"In the neighborhood of Sicyon there is a river Selleis and near it is a village Ephyra. Also in Agraea in Aetolia is a village Ephyra and the people from there are called Ephyroi. Others so called are those Perrhaebians over toward Macedonia, and the people of Crannon, and the Thesprotians who come from Cichyrus, formerly named Ephyra."

This whole passage looks, as Dr. Leaf has pointed out for part of it, like a learned deduction from Homer and does not inspire much confidence. So far as appears, none of these Ephyrae was personally visited or seen by Strabo. All he did see was a river in Elis called the Selleis which reminded him of Homer and gave him a starting point for his digression. Indeed the identification of this river Selleis in Elis is probably the only trustworthy fact one can glean; and Strabo's further mention of it in chapter 7 below seems conclusive. The passage itself, however, deserves some attention.

In the first paragraph four cities named Ephyra are mentioned, namely one in Elis, one in Thesprotia, one in Thessaly, and the traditional one at Corinth. Of these four only that in Elis has a river Selleis near it, and Strabo consequently deduces that this must be the scene of those exploits related by Homer with reference to a stream of that name. I do not understand Dr. Leaf's statement (*Homer and History*, p. 178), "But Strabo says there was no river Selleis there." Two times specifically and once by implication Strabo says there was a river Selleis there.

Then after the quotations from Homer follows a curious paragraph naming two villages called Ephyra, one hard by Sicyon with a river Selleis near it, the other in Aetolia, and recording that certain people in Thessaly and in Thes-

Isthmian side of both the two natural boundaries which may be taken to have separated Corinthian from Sicyonian territory are the following sites which were certainly inhabited in the period under consideration:

2.¹ Mylos Cheliotou, an isolated hill about half a mile north-west of the temple of Apollo, and, therefore, barely outside the circuit of classical Corinth. The Late Helladic or Mycenaean sherds found here include examples of Late Helladic I and II, but for the most part are of the Late Helladic III type, belonging, that is, precisely to the period in question.

3. Aetopetra, standing across the mouth of a deep ravine, which divides into two branches round it, some two miles west of Old Corinth, about one mile east of the Longopotamos, and eight miles from Sicyon. A great deal of Early, Middle, and Late Helladic pottery has been picked up here. The bulk of the last named kind is of the Late Helladic III type.

5. Korakou, on the shore of the Corinthian Gulf, one half mile east of Lechaëum. The Third Late Helladic Period is represented by considerable remains of houses as well as by masses of pottery.

6. Arapiza, about one mile and a half east of Old Corinth, and just across a ravine from the east wall of the classical city. The Mycenaean pottery found here is of the typical Late Helladic III style.

8. Gonia, a broad ridge approximately half a mile north of Examilia. This is in extent, next to Corinth itself, probably the largest of the prehistoric settlements in the Corinthia. A number of trial pits dug here produced a great deal of material dating from the Neolithic as well as from the Early, Middle, and Late Helladic

protia were also known as Ephyræans. These two latter references clearly correspond to two of the Ephyræ already listed in the first paragraph, and there can hardly be much doubt that the village near Sicyon is really a second version of the Corinthian Ephyræ mentioned above. In other words the last paragraph repeats in a confused way much of the matter of the first paragraph, and is inconsistent with part of it. I venture to suggest that the whole of the last paragraph is nothing more than a gloss which in some way has percolated into the text. It certainly does not bear the marks of authentic first-hand information. An Ephyræ by a river Selleis near Sicyon is mentioned by no other ancient writer (save Stephanus of Byzantium, who is evidently drawing from his text of Strabo), and there is no other evidence anywhere that the name Selleis was borne by any of the Sicyonian rivers.

¹The numbers here given are those used in *A.J.A.* XXIV, 1920, pp. 1 ff.

Periods. The Late Helladic pottery includes a generous amount of the Third Late Helladic style.

9. Perdikaria, about one mile east of Examilia, along the road to Cenchreae. The "Mycenaean" potsherds picked up here are of the Late Helladic III style, and a Cyclopean wall resembling some of those at Mycenae is visible on the slope of the hill.

To the above six sites may now probably be added number 4, at the church of St. Gerasimus; some Middle and Late Helladic (Late Helladic III) sherds collected at this point have recently been shown to me.

It is clear from the evidence here presented that there was no tendency of the population to move down to the sea in Late Helladic times. Korakou was occupied all through the Bronze Age from the Early Helladic through the Late Helladic Period and does not represent a new settlement in "Achaian" times. The other sites named above, Mylos Cheliotou, Aetopetra, Arapiza, Gonia, and Perdikaria are all at some distance from the sea, and all seem to have maintained their existence from the Early Helladic right down through the Late Helladic Period. There appears to have been no shift of population; on the contrary, it apparently maintained itself tenaciously exactly in those spots which were occupied at the beginning of the Bronze Age.

One small site indeed, Yiriza (No. 7), and the only site for which we yet have definite proof of the fact from excavations, was evidently abandoned at the end of the Early Helladic Period, that is, six hundred years or more before "Achaian" times. But this site lies so close to the large settlement at Gonia—no more than 400 yards away—that it could have had little reason for independent existence.

Of the remaining sites which in my paper were mentioned as yielding remains only of the Early Helladic Period, St. Gerasimus (No. 4), by the sea, has now, as we have seen, produced potsherds of later date. The sites at Cenchreae (No. 10), on the sea, and at the Isthmus (No. 11), not far from the sea, where prehistoric objects hitherto observed are limited to a few Early Helladic sherds, have not yet been excavated, and one cannot safely assert that digging would not bring to light objects of the Middle and Late Helladic Periods. But if they really were abandoned at the end of the Early Helladic Period, this desertion must have taken place many hundred years before the time of Agamemnon.

From the analogy of those sites Corinth itself may also with

reasonable confidence be expected some day to reveal real evidence of Mycenaean or Late Helladic occupation. Dr. Alice L. Walker, who is completing an exhaustive study of the material from the excavations besides carrying out painstaking investigations of her own, has generously given me the following note:

"For the occupation of the site of classical Corinth in prehistoric times there is abundant evidence, despite the difficulties that have attended the excavation for prehistoric strata at a place which has been almost continuously inhabited during the historic period, and where, moreover, the presence of classical monuments sometimes completely forbids the uncovering of early levels.

"The first settlement on the Temple Hill must be dated earlier than any known settlement in southern Greece; and this primeval Corinth would seem to have had comparatively extensive external relations. The settlement continued into the Early Helladic Period, and the indications are that its external relations were at this time even more extended, while the settlement itself expanded and grew until it was, in size and importance, the first in the Corinthia. The fact that no indications of a fortification wall have been found cannot be held to refute such an estimate of the importance of the Corinth of the Neolithic and Early Bronze periods; for in those days the inhabitants of the Corinthia and, indeed, of Greece generally, either did not know this very obvious means of defense or did not feel the need of it.

"There is no evidence for the continuance of the settlement into the later phases of the Early Helladic Period; nor for the occupation of the site in the next period; and, though a few Mycenaean sherds have been found since Richardson wrote his article for the *Encyclopaedia Britannica*, it cannot be said that there is any ceramic evidence for the occupation of the site in Mycenaean times. There is possibly some architectural evidence for such an occupation: in 1909 there was uncovered just outside the eastern entrance to Pirene and slightly northeast of it at a low level part of a building, probably a spring-house, the roof of which had been made by a corbelled vault of the kind which appears, for instance, in the bee-hive tombs at Mycenae and in the galleries at Tiryns. It may be mentioned here that many years ago Skias (Πρακτικά, 1892, pp. 117 ff.) called attention to the occurrence in the circuit of the fortification walls on Acrocorinth of portions of masonry which seem to be Cyclopean; and that the wall about Upper Pirene presents the same appearance.

"In considering the significance of these various facts it must always, however, be remembered that the excavations have uncovered only a very small part of the area of classical Corinth (Strabo, VIII, p. 379) and that a Mycenaean settlement, and an extensive one, might have existed some considerable distance from the excavated region and still have been within the circuit of the city of the historic period; and that, moreover, the excavations have been made almost wholly in the ancient agora and the districts adjoining it,—that is, in the part of the ancient city which was most liable to change, and in which evidence originally existing might have been very easily obliterated by the processes of destruction and building that went on through the many centuries of subsequent occupation."

All of the sites discussed above are in Corinthian territory; none of them can be claimed for Sicyon. Six of them were certainly, a seventh probably, inhabited in "Achaian" times. One was abandoned shortly after 2000 B.C.; for three others the evidence is not yet conclusive one way or the other. Apart from Corinth itself, the two sites that have been excavated were evidently of some local importance. What the relative significance of the others was can be determined only by further excavations. In any case it is clear that in "Achaian" times the Corinthia was comparatively thickly populated and prosperous, and the facts now available surely do not indicate that "the nearest inhabited place must have been the adjacent and fertile plain of Sikyon."

One of these sites in the Corinthia, probably the chief settlement, was presumably Ephyra. The evidence of Strabo as to its exact situation seems to me entirely inconclusive. My own opinion is that it was Corinth itself; but it may well have been Aetopetra, as Dr. Leaf now maintains. In *Homer and History* no less than five possible situations are suggested¹ for Ephyra, and the Selleis is once tentatively identified with the Nemea River² and on the map with the Longopotamos. For this reason it seemed to me that both the site and the identification of the river might properly be called hypothetical. On Dr. Leaf's map of Homeric Greece the site of Ephyra appears very near to the hill now called Aetopetra. Its apparent proximity here to Sicyon should not,

¹Near Sicyon, p. 178. In one or other of the plains of Phlius, Nemea, or Cleonae, p. 219. In the valley of the Longopotamos, Map VII (Homeric Greece).

²p. 218.

however, mislead; for by a slip Sicyon has on this map been shown some five miles eastward from its correct position, being placed on the Nemea River instead of on the Asopus. Aetopetra is in Corinthian territory.

In conclusion I must confess that it seems to me of no great consequence whether Ephyra be placed in one particular spot or in another close beside it. Whether it was actually at Corinth itself or at one of the many surrounding sites matters little. The exact situation may indeed never be identified. But wherever it was, it was no doubt the capital of the Corinthia in Achaean times and as such probably exercised sovereignty over a district which was certainly well populated and prosperous, and which from the evidence we have might appropriately be called wealthy. I do not maintain it was the capital of Agamemnon. I have merely endeavored to present the archaeological evidence for use in any further discussion of the problem.

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THE AEOLIC CAPITALS OF DELPHI

By a combination of four architectural fragments now in the Museum at Delphi, Dr. Pomtow has constructed a new and unprecedented form of capital (Fig. 1 b). If this restoration of the

"double palm capital," as he designates it,¹ could be justified, it would have an important bearing on the origin of the Corinthian style.

The fragments in question come from a small marble building in the precinct of Athena Pronaea,² generally supposed to be one of two chapels erected as expiatory offerings after the feud of Crates and

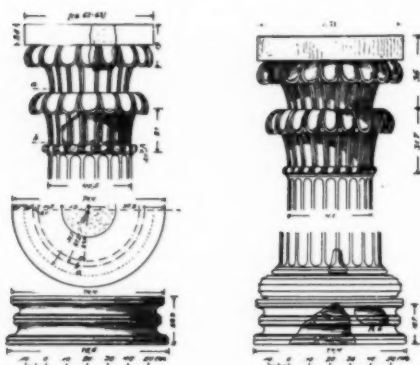


FIGURE 1.—CLAZOMENIAN AND MASSILIOT COLUMNS, WITH DOUBLE CAPITALS.

Orgilaus,³ or a temple of Eileithyia or Hygieia;⁴ more convincing is M. Homolle's original identification of the building as a treasury of Phocaea.⁵ I prefer to believe, however, that it was the well-known treasury of Massilia (Diodorus, XIV, 93), later called that of the Massiliots and Romans (Appian, II, 8; cf. Justinus, XLIII, 5, 8; Pausanias, X, 8, 6).⁶ Judging from style

¹ *Berl. Phil. W.* 1912, cols. 1043-1045; *Klio*, 1913, pp. 203, 236-237, 240-244.

² Homolle, *J. B. Archit.* 1903-04, p. 39; Dinsmoor, *B.C.H.* 1913, pp. 21-22; Pomtow, *op. cit.*

³ Pomtow, *Klio*, 1906, pp. 104, 126; 1913, pp. 199-200; Keramopoulos, *Guide de Delphes*, p. 74; Karo, *B.C.H.* 1910, p. 215; Robert, *Pausanias als Schriftsteller*, p. 285; Bourguet, *Ruines de Delphes*, pp. 316-319.

⁴ Frickenhaus, *Ath. Mitt.* 1910, p. 245.

⁵ Homolle, *C. R. Acad. Insc.* 1901, p. 639; *R. Art. Anc. Mod.* 1901, p. 372.

⁶ Poulsen, *B. Acad. Danemark*, 1908, p. 385; Dinsmoor, *B.C.H.* 1912, pp. 482-485; 1913, pp. 5-82.

and historical connections, the date of the structure must have been about 535 B.C.¹

Of a similar structure, the Clazomenian Treasury,² only two fragments of capitals survive; they resemble the Massiliot fragments (with eighteen instead of twenty-two "leaves"), but are not sufficient to permit an independent restoration of the form of the capital. Historical and stylistic considerations seem to indicate that these capitals are even earlier than those of the Massiliots, dating from about 550 B.C.

Before Pomtow published his theory, it had always been supposed that these Delphian capitals were of a simple inverted bell or calathos type. Even before other bell capitals were known, the two Massiliot capitals,

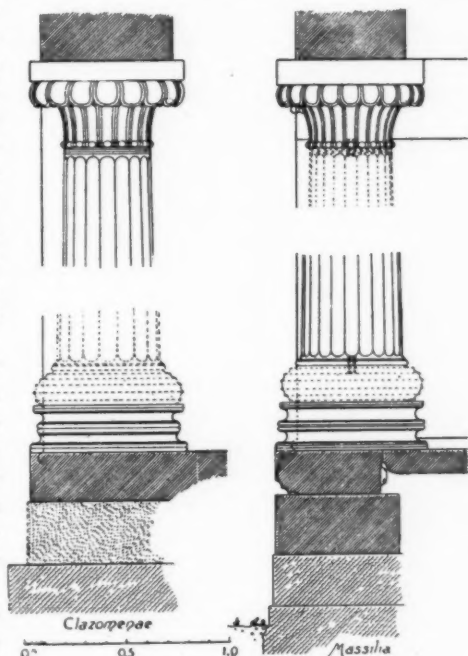


FIGURE 2.—CLAZOMENIAN AND MASSILIOT COLUMNS, WITH SINGLE CAPITALS.

¹ *B.C.H.* 1912, p. 483; Poulsen had suggested about 520 B.C. According to the latest investigations by Persson and Replat (*B.C.H.* 1920, p. 390; 1921, pp. 316-334, 521), the columns would be even later, dating from an alteration of the treasury at the beginning of the fourth century. Such a date is absolutely impossible for the columns, with their peculiarly profiled bases and with the archaic fluting of the shafts; they must at least have been carved during the sixth century, and the evidence in favor of the alteration, promised for publication in the immediate future, must be carefully weighed before it can be accepted.

² Homolle, *J. B. Archit.* 1903-04, p. 39; Dinsmoor, *B.C.H.* 1913, p. 22; Pomtow, *Berl. Phil. W.* 1912, col. 1043; *Klio*, 1913, pp. 202, 237.

one "A" (Fig. 3) with and the other "B" without an abacus, both then lying in the court of the church on the site of the gymnasium at Delphi, had been drawn by passing travelers. Thus we have a hasty note by Fauvel,¹ and also three drawings dating from 1820 (two of capital "B" by Kinnaird² and



FIGURE 3.—MASSILIOT CAPITAL: DELPHI MUSEUM.

Wolfe,³ and a perspective drawing of capital "A" by Donaldson⁴); only the last of these drawings has been published,⁵ and in recent discussions it has been frequently reproduced and wrongly attributed to Cockerell, the chief editor of the volume in which it first appeared.⁶ Donaldson could not determine

¹ Paris, Bibl. Nat. Cabinet des Estampes, Gb. 15a, fo. 69.

² Kinnaird, in British Museum, Dept. of Prints and Drawings (case 42d, portfolio A, Original Drawings by Stuart, etc.); cf. Hasluck, *B.S.A.* 1911-12, p. 275.

³ Wolfe, portfolio II, fo. 50, in the library of the Royal Institute of British Architects, London.

⁴ Donaldson, *Scrap Book—Greek and Roman*, in the library of the Royal Institute of British Architects, London.

⁵ Donaldson, Description of various fragments from Athens, Delphi, and Asia Minor, pl. II (in Cockerell, *Antiquities of Athens*, V, 1830; repeated in 2nd ed. IV).

⁶ Bötticher, *Tektonik*, 2nd ed., pl. 42, fig. 1 (cf. p. 351); Bohn, *Pergamon*, II, p. 48; n. 1; Homolle, *J. B. Archit.* 1903-04, p. 39; Reinach, *R. Ep.* 1913,

whether "A" formed a capital or a base; Bötticher, Bohn, and Perrot and Chipiez all agreed that it was a capital, and that it supported a wooden architrave; Perrot and Chipiez even assumed that the abacus shown in the published drawing was a wilful restoration by Cockerell (= Donaldson), but this assumption is certainly erroneous. Pomtow had seen "A", still in the court before the church, in 1884;¹ after the French excavations, it was brought to the Museum at Delphi, where it is now exhibited (Fig. 3).² Meanwhile "B" had been broken into small fragments, of which three were brought to the Museum, and I found two others in the gymnasium.³ The official French theory is represented by a composite cast from the fragments of "A" and "B", and likewise exhibited in the Museum (Fig. 4):⁴ for "A" supplies the form



FIGURE 4.—MODEL OF MASSILIOT CAPITAL: DELPHI MUSEUM.

of the abacus which is missing in "B", while on the other hand the beads at the bottom, now cut away from "A", must be supplied from the fragments of "B". I followed the same process, restoring each capital as a single bell, with an abacus above and a beaded astragal below, when making drawings of these capitals (Fig. 2 b).⁵

According to Pomtow's restoration, however, the Massiliot capital is composed of two superposed blocks. At the bottom he places "B", with a height of 0.317 m., a lower diameter of

p. 280; Pomtow, *Klio*, 1913, p. 242. Redrawn in elevation by Bötticher, *Tektonik*, 2nd ed., pl. 4, fig. 2, and in isometric perspective by Perrot and Chipiez, *Histoire de l'art*, VII, p. 637.

¹ *Klio*, 1913, p. 241.

² Reproduced from *Klio*, 1913, pl. II, fig. 49a.

³ *B.C.H.* 1913, p. 21.

⁴ Reproduced from *Klio*, 1913, pl. II, fig. 49b. Dürm's sketch of this model (*Baukunst der Griechen*, 3rd ed., p. 353, fig. 341 II) is incorrect (cf. *B.C.H.* 1913, p. 21; *Klio*, 1913, p. 243, n. 1).

⁵ Reproduced from *B.C.H.* 1913, p. 17 (cf. pp. 21-22).

0.41 m., and a maximum diameter of 0.63 m. across the overhanging leaves (as scaled from his drawing). Above this he places "A", with a height of 0.36 m., of which 0.12 m. is devoted to the abacus, leaving only 0.24 m. for the bell; the leaves, here again 0.41 m. in diameter at the bottom, overhang until the maximum diameter at the top is 0.71 m. (again as scaled from his drawing). Thus the lower bell is 0.077 m. higher than the upper, but the lower leaves have less projection by 0.04 m. On this analogy he likewise restores the Clazomenian fragments.

The ugly form resulting from this restoration is one on which German archaeologists have recently attempted to base historical deductions of considerable importance. Pomtow himself finds the origin of these Delphian capitals in the Egyptian palm capitals, and as a connecting link points to the capital of the first temple of Apollo at Naucratis, apparently assuming that the drawing by Chipiez¹ represents the complete capital; the beaded astragal forms the lower bell, the egg-and-dart becomes the upper bell! By such reasoning we are reminded of the early travelers who found the Ionic column of the Heraeum at Samos in exactly the same state of preservation, complete to the top of the egg-and-dart moulding, and, therefore, acquiesced in the blunder of Vitruvius (VII, praef. 12: "*de aede Iunonis quae est Sami dorica*"). Like the capital at Samos, the Naucratis capital was actually purely Ionic; one volute was found, and the capital has not the slightest relation to those at Delphi. The only true cases of reduplication cited by Pomtow,² occurring in Egyptian and Mesopotamian wall decoration and furniture, are not capitals but decorative adaptations of the lotus; if they have any architectural relation at all, it is to the Ionic capital and not to the examples at Delphi.

In an article dealing with the origin of the Ionic column, Miss Braun-Vogelstein accepts this theory that the "double palm capital" was of Egyptian origin.³

Professor Lehmann-Haupt traces the descent of the double capitals of Delphi rather from Armenia and Mesopotamia.⁴

¹ Perrot and Chipiez, *op. cit.* VII, p. 619, II-III; Springer and Wolters, *Kunstgeschichte*, I (11th ed., p. 157, fig. 308); Pomtow, *Klio*, 1913, p. 240, fig. 47.

² Pomtow, *Klio*, 1913, pp. 244-246.

³ Braun-Vogelstein, *Jb. Arch. I.* 1920, pp. 33-34, pl. III, 8.

⁴ Lehmann-Haupt, *Klio*, 1913, pp. 468-484.

But the successive garlands of leaves shown as analogies, occurring on Armenian and Chaldaean furniture, are not such as to require architectural counterparts; and as ancestors of our capitals they would assume importance only if Pomtow's reconstruction were to be accepted.

In a study of the origins of the Corinthian capital, Dr. Weigand adopts this view of Lehmann-Haupt, and even professes to find a later analogy for this type which Pomtow regarded as unique; for Weigand does not hesitate to accept the nondescript little capital in the late Varvakeion statuette as a faithful copy of a capital designed by Phidias, in imitation of the double capitals of Delphi.¹

Now, if we return to the Massiliot capitals themselves, I think it can be demonstrated that, just as the supposed ancestry of the double capitals is unconvincing, so even the restoration which has given rise to all this discussion is based on hasty observations and ill-considered evidence.

The bottom of capital "B" was 0.40 m. in diameter, excluding the beaded astragal, which must have projected about 0.02 m.; the central part of the bottom, a circle about 0.24 m. in diameter, is depressed and roughened, and at the centre is a round dowel hole 0.05 m. in diameter and 0.05 m. deep, by which the capital was fastened to the shaft. The maximum overhang of the curling top is now only 0.11 m. in the larger fragments, but a smaller piece increases the amount of the overhang to about 0.15 m., so that the maximum diameter near the top of the capital was about 0.70 m. (instead of Pomtow's 0.63 m.); greater accuracy is impossible in view of the present condition of these fragments. The actual top of the stone formed a circular bed about 0.56 m. in diameter, so tooled as to indicate that it was entirely covered, that the stone above, in other words, must have been an abacus and not another bell only 0.40 m. in diameter.² An upper bell would certainly, furthermore, have left some weathered traces on the top of the lower piece; and on the latter the tops of the leaves would probably have been carved (like the eggs at Nau-

¹ Weigand, *Vorgeschichte des korinthischen Kapitells* (Würzburg, 1920), pp. 15-17, pl. I, 8.

² Pomtow's phrase "*runder Anathyrosis der Oberseite . . . dessen oberer Dm. genau so gross war wie der untere des mit viereckigem Abakus versehenen Kapitells*" (*Berl. Phil. W.* 1912, col. 1043), is suppressed in the later publication (*Klio*, 1913, p. 242).

cratis), instead of showing a sharp edge which would lie 0.08 m. outside the base of the upper bell. The total height is 0.310 m., instead of 0.317 m. as given by Pomtow.

The bottom of capital "A" is likewise 0.40 m. in diameter, and on it no signs of a beaded astragal are now perceptible. In this respect it would fit Pomtow's restoration. As a matter of fact, however, this bottom of "A" is of modern workmanship, roughly hewn and not even parallel to the top, so that the total height, instead of being uniformly 0.36 m. (as given by Pomtow), is 0.363 m. on one side and 0.378 m. on the other. How was the bottom of "A" originally finished? The Donaldson drawing makes the height of "A" greater than the diameter at the base, whereas at present it is less; according to Donaldson the channels stop some distance above the bottom, against a line which is clearly the edge of the beaded astragal,¹ while at present the channels continue to the very bottom. The removal of the original bottom occurred, therefore, after 1820; and we must now restore, below the fluted leaves, a beaded astragal 0.033 m. high like that on "B". What confirms the supposition that "A" was an exact replica of "B" is the maximum diameter through the top of the calathos, namely, 0.71 m., practically equal to the corresponding measurement on "B", rather than 0.08 m. greater as Pomtow represents it.

So the bottom of "A" was like the bottom of "B"; and "B" must have been crowned by an abacus like that of "A". In other words, the two originally formed distinct capitals, each with a total height of 0.430 m. instead of Pomtow's 0.677 m. The drawings and the model shown in Fig. 2 and Fig. 4 remain perfectly correct. The explanation of the only difference between the two capitals, the joint below the missing abacus of "B", is very simple; either the block from which "B" was carved had been defective at this point, or the original abacus of "B" was broken during the construction of the building. In either case, the architect would have preferred to finish the top of "B" at the top of the bell, and to provide a separate slab for the abacus.²

What distinctive name should be applied to the capitals of

¹ It was because of my inference from this drawing that I formerly spoke of "the beads, now barely traceable" (*B.C.H.* 1913, p. 21).

² While the question of the existence of the double capital is the most important for the history of Greek architecture, a few other details in Dr. Pom-

the Massiliot and Clazomenian Treasuries at Delphi? Both were erections of Aeolic cities, and, as we shall see, the later survivals of the type were characteristic of the Aeolic section of Asia Minor. Therefore I have from the first adopted the name "Aeolic" which Perrot and Chipiez applied to this type.¹

To avoid confusion, however, we must abandon the use of the name "Aeolic" in connection with a very different type of capital, to which it is now frequently applied.² This group is composed of very archaic capitals, with the volutes springing vertically, of which examples have been found at Neandria, Mitylene and Nape in Lesbos, and at Larisa near Phocaea; the lower member of these capitals, as we learn from the examples at Neandria and Larisa, was a girdle of hanging leaves.³ A similar girdle of

tow's article (*Klio*, 1913, pp. 199-248), in connection with the columns at Marmariá, seem to require comment.

The fragment assigned to the column shaft (Fig. 1b), now in the magazine of the museum, is of colossal size (fillet 0.014 m., channel about 0.09 m. wide), belonging to a column at least 0.80 m. in lower diameter, whereas the lower diameter of the Massiliot columns was about 0.49 m.; the real Massiliot columns, of which I found 19 fragments, had sharp arrises (*B.C.H.* 1913, pp. 20-21). Pomtow's fragment, not mentioned in the preliminary publication (*Berl. Phil. W.* 1912, col. 1044), was probably identified only from a photograph (*Klio*, 1912, pl. V, fig. 34, at the left).

One of the two complete bases assigned by Pomtow to Clazomenae (*Klio*, 1913, pp. 235-238) was actually found at Marmariá (*J. B. Arch.* 1903-04 p. 38), and differs from the other in dimensions and in profile (cf. *B.C.H.*, 1913, pp. 19-20), perfectly fitting the circles 0.744 m. in diameter incised on the Massiliot stylobate. The two small fragments assigned by Pomtow to the Massiliot bases (Fig. 1b; diameter accurately calculated ?) differ from both the Clazomenian and the Massiliot profiles; I have not seen them and cannot suggest their origin.

As another instance of these hasty methods, I may observe that the ornate seat restored by Pomtow at the base of the inner walls (*Klio*, 1913, p. 247, fig. 58) never existed; the so-called trace is an earthy incrustation which appears also on the top and end joint surfaces of the stone in question; only in a photograph (*ibid.*, fig. 57) could it possibly be mistaken for the trace of actual mouldings.

¹ Perrot and Chipiez, *op. cit.* VII, pp. 637-638.

² Koldewey, *Neandria*, pp. 41-42; Koldewey, *Insel Lesbos*, p. 45; Puchstein, *Ionische Säule*, p. 40; von Lichtenberg, *Ionische Säule*, p. 54; Weickert, *Lesbische Kymation*, p. 33; Meurer, *Formenlehre des Ornaments*, p. 499; Koch, *Röm. Mitt.* 1915, pp. 4, 10; Springer and Wolters, *Kunstgeschichte*, I, 11th ed., pp. 151-152; Braun-Vogelstein, *Jb. Arch. Inst.* 1920, pp. 4-5, 26-30; Weigand, *Vorgeschichte des korinthischen Kapitells*, pp. 39-41.

³ Dörpfeld interpreted these girdles of leaves at Neandria as independent capitals, using the volutes separately for a hypothetical outer peristyle (Perrot

leaves, but lacking its volutes, was found at Aegae.¹ All these are Aeolic cities, as it happens, and, therefore, the name "Aeolic" would be quite suitable but for the fact that this is not an independent form of capital. It is obviously the ancestor of the well-known Ionic capital; the vertical volutes gradually became horizontal and were connected, while the girdle of hanging leaves was gradually reduced to the egg-and-dart moulding; all the steps of the transformation can be traced. Therefore a far more convenient and descriptive name for this group would be that applied by Clarke, who discovered the earliest known example, namely, the "Proto-Ionic" capital.²

Such a change would leave the term "Aeolic" free for employment with the calathos type, which is likewise distinctive of the Aeolic district, and is, unlike the Proto-Ionic capital, a distinct type, lasting throughout Greek history. Most of the known examples are late, and of Pergamene workmanship. Thus they were employed for interior columns in the north stoa of the sanctuary of Athena Polias at Pergamon (by Eumenes II),³ in the Stoa of Eumenes II at Athens,⁴ and in the Stoa of Attalus II at Athens.⁵ The first of these has no abacus, but in the two others the abacus was a prominent feature.

and Chipiez, *op. cit.* VII, pp. 622-627; Springer and Wolters, *Kunstgeschichte*, I, 11th ed., pp. 156, 158). But Koldewey's combination was defended by Puchstein, Meurer, Weickert, and Koch, and has now been verified by the finds at Larisa.

¹ Bohn, *Altertümer von Aegae*, p. 32; Bohn assigns this, with doubtful propriety, to a late stoa.

² Clarke, *A.J.A.* 1886, p. 1. This seems to be the opinion also of F. von Luschan, who terms it "Ur-ionisches" (*Ionische Säule*, p. 9).

³ Bohn, *Pergamon*, II, pp. 47-48, pl. XXIV-XXV; Pontremoli and Haus-soullier, *Pergame*, pp. 111-113; Perrot and Chipiez, VII, pp. 637-638; Durm, *Baukunst*,² p. 351, fig. 338.

⁴ Fragments assigned by Bohn (*Pergamon*, II, p. 48, n. 1) and Perrot and Chipiez (VII, p. 636, n. 2) to the Asclepium. Versakis restored Ionic capitals in the Stoa of Eumenes (Εφ. 'Αρχ. 1912, p. 180, fig. 32), and assembled twelve fragments of the Aeolic capitals in the west stoa of the Asclepium; a thirteenth fragment still lies below the Stoa of Eumenes. Durm alone correctly identifies these capitals as from the Stoa of Eumenes (*Baukunst*, 3rd ed., pp. 351-352). A recent attempt by Dr. Viale (*Boll. Arte*, 1920, *Cronaca* pp. 53-54) to return to the old theory that this Stoa is of the date of the Odeum of Herodes Atticus or even later, seems impossible even if we regard solely the evidence of these capitals.

⁵ Fragments identified by Bohn (*Stoa König Attalos zu Athen*, pp. 6-7, pl. 2); Perrot and Chipiez wrongly state that these capitals lack the abacus (VII, p.

And finally, there is another aspect in which we must consider the Delphian capitals. At the time of their execution, the Corinthian capital did not yet exist. But it is tempting to suggest that Callimachus, the inventor of Corinthian capitals and the sculptor of Caryatids, had studied the four archaic marble treasuries at Delphi, and had drawn therefrom suggestions for both types. Then the Aeolic basket capitals could be regarded as direct ancestors of the Corinthian capital which made its first appearance at Bassae about 450 B.C.

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636, n. 2); unpublished fragments show that, as in the Stoa of Eumenes, there was a *griffe* under each corner of the abacus. These capitals of the Stoa of Attalus are wrongly rejected by Versakis ('Εφ. 'Αρχ. 1912, pp. 179-180), on the ground that they would require fluted shafts; but compare the above-mentioned examples from Pergamon.

THE DATE OF THE METOPES OF THE ATHENIAN TREASURY AT DELPHI

IF the metopes of the Athenian Treasury at Delphi can be dated definitely following Marathon, as French archaeologists persist in maintaining in spite of the present almost unanimous rejection of the date by their colleagues in other countries,¹ there are two advantages: Pausanias is vindicated, and a fixed date is established in a difficult period. It seems clear, therefore, that rejection should follow only the most convincing proof of the contrary. In this paper I wish to reëxamine the question in the light of all of the available data.

We have the following as grounds for our judgment: the literary evidence of Pausanias, the architecture of the building, and the technique of the sculptures with relation to those of the Alcmaeonid temple, the temple at Aegina, the Harmodius and Aristogeiton group, and to the red-figured vases.

Certain other grounds for dating have been proposed, without, however, any great significance. It has been urged for the earlier date that the Alcmaeonids may have erected the Treasury as an expression of thanks and piety, or Athens may have done so in gratitude for the expulsion of the tyrants, or to commemorate the victory of 506; furthermore that the city was too poor

¹ Homolle, *Gaz. B.-A.* 1895, I, p. 202; Colin, *Fouilles de Delphes*, III, 2, pp. 7-10; Perrot, *Histoire*, VIII, p. 574; Bourguet, *Les Ruines de Delphes*, p. 107; also accepted by Furtwängler, *Aegina*, p. 351; and E. Gardner, *Six Greek Sculptors*, p. 33. The metopes are attributed to the last decade of the sixth century by the following: Pomtow, *Jb. Arch. I.* 1912, p. 85; L. Curtius, *Berl. Phil. W.* 1905, p. 1666; Katterfeld, 'Die griechischen Metopenbilder,' in *Zur Kunstgeschichte des Auslandes*, Heft 92, pp. 24, 73; Michaelis in Springer's *Handbuch*, p. 180; Laum, 'Die Entwicklung der griechischen Metopenbilder,' in *Neue Jb.* 1912; Robert, *Pausanias als Schriftsteller*; Lücken, *Ath. Mitt.* 1919, p. 98; Langlotz, *Zur Zeitbestimmung der strenggroßfiguren Vasenmalerei und der gleichzeitigen Plastik*, p. 72; D. M. Robinson, *Cl. Weekly*, 1921, p. 46, dates them at 510. Dinsmoor informs me that he would place the building "at least before 513." I understand that Keramopoulos favors the last decade of the sixth century, and F. Poulsen writes me that he is disposed to reconsider the date following Marathon which he accepted in *Delphi* (p. 162) and agree with Robinson that 510 is correct.

following Marathon to erect it, and at that period treasuries were built, not as trophies of victory, but through motives of piety alone. But there is no evidence to lead one to believe that the Alcmaeonids, having secured the favor of Delphi by building the temple, saw need of going to the additional expense of erecting this building; the city was not poor following Marathon; and there is record of one treasury (Cnidian) dating from the middle of the sixth century which was built from the spoils of battle.¹

For the later date Colin maintains² that because the inscription³ found is not actually on the building one must not necessarily assume it does not apply; the Treasury has no inscription of its own, and the one on the trophy base clamped on the terrace might very conveniently refer to the Treasury. This may be regarded as possible.

I

The sole literary evidence for the date is found in Pausanias.⁴ He says that the building was erected as an offering of the Athenians from the spoils of Marathon. This explicit statement has been attacked on the grounds that Pausanias was often careless and unreliable, and in this case, doubtless, saw the inscription on the trophy base beside the Treasury and wrongly inferred that it applied to the building as well.

This may quite easily be true. But it is fair to Pausanias and the problem to acknowledge that he may have had other sources of information. Possibly an ill-founded tradition may have developed in Delphi itself by Pausanias' time, to the effect that the Treasury was from the spoils of Marathon. There are plenty of possible explanations; but the fact remains that Pausanias makes a definite statement of fact, which must not be regarded too lightly.

II

The architecture gives little help in exact dating. According to Dinsmoor,⁵ the Treasury and the Alcmaeonid temple are "evidently contemporary" (ca. 506). The clamp used is dovetail, similar to that of the Hecatompædon, whereas later Athenian

¹ *Fouilles de Delphes*, III, 1, No. 289.

² *Ibid.* III, 2, p. 2.

³ *Ibid.* III, 2, p. 7.

⁴ X, 11, 5.

⁵ *B. C. H.* 1912, pp. 492 and 485 n. Mr. Dinsmoor's reasons now for assigning the building to a date before 513, as he has kindly stated them to me, are important. "(1) The material is Parian marble and so would indicate a date

building, even the Alcmaeonid temple, employs the H-clamp;¹ this would indicate a date earlier than 506. Poulsen points out² that the clamp might be a survival due to conservatism, but that the echinus, cornice, pediment plinth holes and antae are similar to those of the temple of Aphaea, at Aegina, which Furtwängler is probably correct in assigning between 490 and 470.³ Bourguet is impressed by the fine proportions of the echinus, which he believes indicates as late a date as 485. Langlotz, on the other hand, points to the five guttae and the broad, full curve of the triglyph groove as evidence of a date slightly earlier than the Aphaea temple.

All this seems rather slim evidence to decide between dates as close as 510 and 490. The most reliable item is the clamp. It might reasonably be expected that a purely utilitarian improvement would be adopted by succeeding builders. That this is not the case is proved by the fact that the Alcmaeonid temple, of which the sculpture obviously points to an earlier date than the Treasury, employs the later style of clamp.

III

Fairly sure dates may be assigned for the following sculptures: the Alcmaeonid temple pediments, in the later part of the period 513-506;⁴ the Aegina east pediment, 478, and west pediment between 500 and 478;⁵ and the Tyrannicides, 477-6.

before 490 rather than after, when the Athenians were using their local Pentelic marble (as in the Older Parthenon and Propylon) and probably would not have imported Parian. (2) The clamps. (3) The treatment of broad raised anathyroses on the horizontal beds is like that in the Massiliot and Siphnian Treasuries (535-525) and in the *forecourt* of the Old Propylon at Athens (ca. 525), whereas later the beds were practically level. In short, my whole impression of the technique of the construction is that its closest analogies are to be found in the Siphnian Treasury of about 525." The only reply to this is, I think, that early constructional elements may have survived under a conservative architect, since the structurally similar Athenian Treasury has sculptural decoration manifestly so much later than that of the Siphnian Treasury.

¹ *Aegina*, p. 67.

² *Delphi*, p. 162.

³ *Aegina*, pp. 67, 496.

⁴ See Dinsmoor, *B.C.H.* 1912, p. 492; Homolle, *B.C.H.* 1902, pp. 597 ff.

⁵ There is much room for hypothesis regarding the Aegina pediments; I accept Furtwängler's date for the east; the west can hardly antedate it by many years, so I incline to believe it was completed between 490-480 and destroyed during the great Persian invasion rather than by the expedition of Mardonius in 490.

The Alemaeonid figures may without hesitation be assigned to an earlier date than the Treasury metopes. Langlotz places them in the same part of the period 510-500; but an actual examination of the modeling of the torso he illustrates (pl. III, 6) reveals its earlier technique. To be sure it represents a different artistic conception from that of the Treasury metopes, similar to Acropolis No. 692, the Eretria pediment figures, the torso from Marion in the British Museum and two torsos from Sicily.¹ But this will not account for the archaic triangular shape of the belly cage (cf. with the early Acropolis horseman, Perrot, *op. cit.* p. 635, fig. 325) and the navel, nor for the uncertain modeling. In no respect can it be considered as advanced as No. XXXIX of the Treasury. And this is technically the most advanced torso of the pediments; the horses, the giant and Athena are much closer related to the Hecatompedon than to the Athenian Treasury.²

The Aegina west pediment torsos are superior to those of the Treasury in the relation of breast to belly, the softening down of the divisions; and if they are to be dated prior to 490, a date later than that is unlikely for the Treasury. But this is conjectural; and even if true, it is necessary to note that in certain respects the Treasury figures are superior, *e.g.*, No. XLII is more advanced than the falling warrior (*Aegina*, p. 218, fig. 164) in the subtle treatment of the back; the belly muscles of No.

¹ *Ath. Mitt.* 1900, pls. XV, XVI, 2; Deonna, *Les Apollons*, p. 238, fig. 163 (7); *Mon. Ant.* XVIII, pls. 3, 6. Langlotz adds to these the torso from Daphne (*A.J.A.* 1894, pl. XI) which certainly belongs to quite a different type. I must also question his judgment regarding the Eretria figures, which he assigns to a later date than the metopes (500-490). It may be true that this date is correct for the "Theseus and Antiope," but the group is in any case earlier than the Treasury metopes. To specify: the lips of the Theseus of No. XXXIX have sketchily indicated the dimple curve instead of the simple, downward incision of the Eretria lower lips; the belly muscles are more uncertain; the drapery is in the old Ionic tradition, not three-dimensional; the muscle contours are not so well understood (Langlotz is wrong in claiming that the Eretria back muscles are less harshly done; the Cyenus is much more subtle); finally, the relation of the figures to the background is poorly grasped. Furtwängler is surely correct in calling the pediment earlier than Aegina, and Lechat (*La sculpture grecque*, p. 47) a little overgenerous in placing it contemporary with the Treasury.

² It has been pointed out that the female figures are similar to Antenor's *kore*, and the horses like those on an Execias vase (*W. Vor.* 1885, 5, 1). See Lücken, *op. cit.* p. 82, n. 2.

XXXIX are less rigid than those of the temple torso; the veins more subtly marked. The east figures show decided superiority to those of the Treasury in the understanding of anatomy; but even there the metopes will successfully stand comparison in the representation of muscular strain and motion. Cf. Nos. XLIII, XLI and XLIV-V, 6 with *Aegina*, p. 247, fig. 202.

At first glance the bodies of the Tyrannicides appear more than a decade later than those of the metopes. The relation of breast to belly and of belly to ribs, and the region around the navel, are much better understood. Perhaps it is fair to observe that the statues are copies; and, even though undoubtedly accurate ones, they must not be treated quite on equal terms with originals. Also the torsos are not in as involved attitudes, so that the problems there were simpler. It then becomes a question of the possibility of such development taking place in ten years' time. It appears to me not impossible.

The heads have been rather widely compared with the Hecatompedon Athena, the Eretria "Theseus and Antiope," the Rampin and Jacobsen heads, and the "Phormis" head at Olympia. Undoubtedly all of these represent an atelier tradition which we may call the Attic adaptation of the Ionic type, and fall within the period 530-480. They may be usefully compared with the Treasury heads with respect to differences in artistic conception and date, but since none of them can be definitely dated, this would serve us no useful purpose here. The same may be said regarding the Acropolis museum heads. The Aegina heads are manifestly later. The west heads are slightly superior in the treatment of lips, and the eyes are set back and the ears better modeled; and the east heads are more accomplished in all respects. Judging from the heads alone, the Athenian Treasury metopes must certainly be placed much earlier than the Aegina pediments; but it must in fairness be observed that the Treasury sculptors seem to have been much more concerned with body than with facial technique, and should be judged, not by the most archaic, but the most advanced, elements.

IV

The chronology of red-figured vases has been so systematically studied in recent years, notably by Langlotz, Lücken and Beazley, that its general outlines can be accepted without question.

Thus by a comparison of the details of costume, contours, body forms and motives, the metopes may be assigned, perhaps, within a decade. One reservation must, however, be made with respect to such comparisons; it must be remembered that relief sculpture, and especially such high relief as the metopes, makes slower progress than drawing; the problems of modeling are less easily solved than those of sketching; and it is significant that Pliny attributes to a painter of the latter third of the sixth century that new technique for rendering motion with which he credits the fifth century Pythagoras in sculpture.¹

In general we may accept Langlotz' chronology, as follows:

- 510-500 Early Euphronius and Euthymides
 Later Euphronius and Euthymides
 Early Cleophrades
 Early Brygus, Duris, Hieron
- 500-490 Middle Brygus, Duris, Hieron
 Onesimus
- 490-480 Riper Brygus, Duris, Hieron
- 480-470 Late Brygus, Duris, Hieron
 Late Epictetus, Euphronius, Cleophrades

In his valuable monograph on the parallels between sculpture and vase drawings, Langlotz finds by a study of details of costume (the chiton of Theseus, drapery of Athena, sleeves of the Amazon of No. XL and Geryon), modeling of heads and bodies, and motives (fallen and falling figures, the led Amazon) that the metope affinities are chiefly with the early Euphronius² and Euthymides, and, occasionally, Sosias, Chachrylion, and (more significantly) Cleophrades, Brygus, Peithinus, Duris and Hieron.

Lücken had previously come to the conclusion from a similar approach that the Treasury must be dated in the last decade of the sixth century. The chief parallels he finds with the later Euphronius, due to the more expressive belly construction, more realistic, full drapery, stockier forms, rounder eyes and thicker lips; the profiles are similar to those on Euphronius' later cups. The same tendencies in sculpture he finds in the Aegina west figures.

¹ Pliny, *N. H.* XXXV, 56; see Buschor, *Greek Vase Painting*, p. 111.

² His point that the metopes are earlier because the Leagrus vases show an understanding of the difference between *standbein* and *spielbein* is just the sort that cannot be applied to sculpture in comparing it with contemporary drawing.

The similarities Langlotz and Lücken have traced are certainly important. But it is not enough to show that the metopes resemble vases painted from 510 to 500. Details of costume and design do not abruptly change; some persist in later vases, and in any case it is not necessary to assume that the changes in sculptural representation exactly correspond. And in certain respects the similarity to Cleophrades' drawings impels the conclusion that the date must be put later than either Langlotz or Lücken grants.

It is true, as Lücken points out, that the faces, especially the eye and the thick lips, are more in the style of the later than the early Euphronius (*e.g.*, the Eurystheus rather than the Antaeus vase). But a still closer parallel is found in the heads of Cleophrades. This was first pointed out by Beazley,¹ comparing the head of Heracles in No. XLII with Louvre vase G 50. "The head of Heracles has a noble largeness of style. These Cleophradean Heracles heads may be compared with the head of Heracles on a metope of the Athenian Treasury at Delphi. The outline drawing, which served as a sketch for such a relief, would be almost exactly like the drawing on the vase." The rich-fleshed cheeks and back of the neck, large eye, thick lips, short, full nose, are points in which the drawings and sculptures are closely related. The head is also relatively large, about the 1:6½ proportion which is characteristic of Cleophrades,² and the pellet hair of Heracles and the incised hair of Sciron find close parallels in Cleophrades drawings.³

In two details the torsos are also similar: the "hatched" ribs (*cf.* No. XLI and Furtwängler-Reichhold, *Gr. Vasenmalerei*, pl. 103) which appear regularly for the first time in Cleophrades and the Berlin painter; and the upper line of the belly cage. The comparison of No. XLI and the Antaeus figure of Euphronius (first cited by Homolle) has been frequently made, but the two are not really very similar. The Euphronius vase indicates a pattern which both sculpture and painting followed for several years, but in the proportions of the four sections above the navel, and especially in the fine breadth and subtlety of the upper line curve the Heracles torso resembles more those of Cleophrades,⁴ the Berlin painter, and even of Duris and Hieron,⁵ and, it may

¹ *J.H.S.* 1910, p. 52.

² Hoppin, *Euthymides*, p. 150.

³ *J.H.S.* 1910, pl. II.

⁴ Hoppin, *op. cit.* pl. XLII.

⁵ Hoppin, *Handbook of Red Figured Vases*, I, pp. 270, 275; *ibid.* II, p. 83.

be noted, the Aegina figures and Tyrannicides instead of the Alcmaeonid pedimental figures.

Lücken points out that the drapery is late-Euphronian. Even the most conservative metope drapery is like the later Euthymides.¹ But here again the most characteristic new element of the metope drapery, the distinction between the thick cloak mass, with broken lines within the folds, and the soft chiton, is not realized to the same extent in drawing until the latest work of Euphronius and that of Cleophrades. Other similarities appear; like Cleophrades are the aegis of Athena,² stylized drapery of Nos. XLIV-V, 6,³ and the stylized lines of the bull's head;⁴ like Brygus and Peithinus are the short sleeves.⁵

The case is rendered still stronger by a study of motives. The chief painters of the Theseus cycle, besides Chachrylion and Euphronius are Duris, Brygus and Aeson. The closest parallels to the bull metope are found in Onesimus (Louvre, unpublished, Giraudon 17296) and the Copenhagen painter (British Museum, E 442); and a variant in Cleophrades (*J.H.S.* 1889, pl. II). The sword gesture of Heracles in No. XLII first appears in Cleophrades,⁶ the leg crumpled under in No. XLVIII, 4 in Duris;⁷ and the closest parallel to No. XLI is on the Onesimus vase already cited.

Now these similarities with work almost certainly done after 500, added to the reasonable hypothesis that relief sculpture learned from drawing rather than vice versa, compel the conclusion that 490 is a more plausible date than 510-500.

V

In the light of this may I suggest some implications? It is apparent that by the time of Marathon Theseus had become accepted as the national hero in place of Heracles. On the Treasury only five Heracles adventures are chosen, and these are placed on the relatively inconspicuous north side, while the Theseus cycle occupies the south side, facing full on the Sacred Way. The sculptures thus show the pride of the Athenians in a hero all their own, the miraculous ally of their soldiers at Marathon (Plutarch, *Theseus*, 35.).

¹ Furtwängler-Reichhold, *op. cit.* pl. 72.

² Hoppin, *Euthymides*, pl. XXXIX.

³ *J.H.S.* 1889, pl. II.

⁴ Klein, *Euphronios*, p. 195.

⁵ See Langlotz, *op. cit.* pp. 72 ff.

⁶ Hoppin, *Handbook*, II, p. 139.

⁷ *Ibid.* I, p. 233.

Both ends are given over to Amazon scenes. The fact that this first instance of sculptural treatment of the subject occurs immediately after Marathon suggests that some symbolic reference to the Persian conflict was intended.¹

Is it too much to claim further that the sense of national victory had a share in accounting for the extraordinary originality and *verve* of these sculptors? I think it has never been adequately recognized in how many respects Athenian architectural decoration originated in this building. Among the innovations are the following: metopes practically square, all filled with sculpture; figures cut very high, much of them in the round; the normal number in the field determined as two; scenes representing unified series, the hero cycle or battle group; natural setting (the tree in the Sinis metope, the rock in No. XLVI-VII, 4); the recognition of the value of free space.²

The most striking innovation of all, however, concerns the treatment of motion. The preference is for vigorous action, expressed by sharp diagonals and flowing curves; figures are set diagonally against the background, with skilfully contrasted planes; the third dimension is emphasized by full draperies and by parts (such as the bull's snout and dog's head) which break through the frame and protrude over the edge.³ In all these respects the sculptors appear to have been keenly original.

It appears to me probable that they were influenced by some master who had discovered new means of expressing motion. Now if the metopes date after 490, it is possible that Pythagoras of Rhegium may be indirectly responsible for these artistic innovations. If we are to credit the statements of Diogenes Laertius,⁴ that Pythagoras was the first "to aim at rhythm and proportion," and of Pliny⁵ that he was a realist in muscular representation, is it not a reasonable hypothesis that in these sculptures, where for the first time such interests are acutely marked, his influence may be seen?

¹ That any such meaning attaches to Amazon scenes is denied by Tarbell in *A.J.A.* 1920, p. 226. While it is true that we have no literary evidence, it is, perhaps, significant that the motive becomes so popular following the Persian wars.

² See Katterfeld, *op. cit.* pp. 77-88.

³ See C. R. Post, 'The Development of Motion in Archaic Greek Sculpture' (*Harvard Studies*, 1909, p. 144 ff).

⁴ VIII, 46.

⁵ *N. H.* XXXIV, 59.

It is possible that Pythagoras himself supervised the work. That his active career had started and his reputation been acquired before 488 is established by the fact that he was famous in antiquity for a statue of Astylus dedicated at Olympia at that date.¹ There is also a reference to work done by him at Delphi.² The subjects of his statues were such as we should expect of the sculptor in charge of the metopes, almost exclusively athletes; and the similarity to bronze technique in the taut forms and sharply worked detail of claws, etc., of the metopes becomes understood when we learn that all the references to Pythagoras are to works in bronze.

I am not going to claim, however, that Pythagoras had any direct connection with the metopes. We have no record of work done by him in marble; among the commissions he received Athens does not figure; Ionic influences in the heads and drapery are too marked, and the Attic character too apparent; and, with a few exceptions, there is not that quality of workmanship which we should credit to so renowned a master.

But it does seem possible that certain Athenian ateliers had been deeply moved by the innovations in motives and technique of this radical young sculptor, known to them from his work at Olympia, and that they adapted some of them to their own work in this building.

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¹ Pausanias (VI, 13, 1) speaks of the statue of Astylus of Croton, victor in three successive Olympiads, who, to please Hiero, proclaimed himself from Syracuse in the latter two. In consequence the people of Croton pulled down the statue of him which stood in their sanctuary. The dates of his victories, according to Dionysius of Halicarnassus (VIII, 1, 77) are 488 (as of Croton) and 484 (as of Syracuse); the *Oxyrhynchus papyrus* (II, CCXXII, 4, 17) adds 480 and 476. If, as appears likely, the statue at Croton was a replica of the one by Pythagoras at Olympia, the latter was made following the victory of 488.

² Pliny, *N. H.* XXXIV, 59.

NOTES ON "LOST" VASES: II¹

THE acquisition by the Museum of Fine Arts in Boston, in the spring of 1922, of a splendid red-figured column-crater, or celebe, of the ripe archaic period,² is the reason for this note. It represents on side A, Dionysus and a Satyr; on side B, a Satyr and a Maenad. It was acquired by purchase, and its accession number is 22.677. In style it recalls the vase of the same shape in New York, attributed by Beazley to Myson;³ but I would not be so rash as definitely to attribute it to that painter himself; I would merely state the resemblance, and that it is obviously of the same period (Figs. 1 and 2).

In comparing this vase with others showing similar subjects, I had the good fortune to discover, before it had come to the attention of any of the staff of the Museum, that it was a "lost" vase; namely Gerhard, *A.V.* 77, which was, at the time of its publication in that series of plates, in the possession of Basseggio in Rome. It then disappeared, and has been regarded as lost, until its reappearance in Boston.

In this connection, it occurred to me to go over my copy of Reinach's *Répertoire des Vases Peints*, and see if I had any additions or corrections to note, since my last communication to the *JOURNAL* on this subject in 1920. To my great surprise, I found enough to warrant the writing of another brief Report on the subject. These vases, as in the previous Reports, are all taken from the *Répertoire*, and the same abbreviations will be used as before.

Ann. dell' Inst.

1849, pl. B. Acquired in 1920 by the British Museum; see

J.H.S. XLI, 1921, p. 119, No. 2, and pl. II.

1882, pl. O. Louvre G364.

¹ See *A.J.A.* XXI, 1917, pp. 409-416, and XXIV, 1920, pp. 271-272.

² Published in Museum of Fine Arts *Bulletin*, XX, 1922, p. 74. For permission to make public this discovery of mine, I am indebted to the kindness of Dr. Lacey D. Caskey, Curator of the Classical Department of the Museum.

³ *V.A.* p. 48, fig. 29.

Bull. Nap.

III, pls. I, II. At Harrow School.

IV, pl. V. Sotheby Sale Catalogue, February 23, 1920, No. 266.¹

VI, pl. II. Acquired in 1920 by the British Museum. See *J.H.S.* XLI, 1921, p. 150, No. 17.



FIGURE 1.—DIONYSUS AND SATYR: COLUMN-CRATER: BOSTON.

N.S. VI, pl. IV. In Corpus Christi College, Cambridge. See *J.H.S.* XLI, 1921, p. 230, No. 3, and pl. XII.

A.V.

46. Acquired in 1895 by the British Museum. See *J.H.S.* XLI, 1921, p. 150, No. 4.

77. Boston 22.677.

98, 5, 6. Metropolitan Museum GR555.

176, 2. Louvre G44.

¹ I owe this reference to a note by S. Reinach in *R. Arch.*, série V, X, 1919, p. 368.

295-296, 5-8. Formerly Czartoryski Collection, therefore probably now in Cracow.

Tischbein.¹

I, 4. In Fitzwilliam Museum, Cambridge.

I, 10. In collection of Sir Charles Waldstein.

I, 13. At Rhode Island School of Design, Providence, R. I.



FIGURE 2.—SATYR AND MAENAD: COLUMN-CRATER: BOSTON.

I, 25. Acquired in 1917 by the British Museum. See *J.H.S.* XLI, 1921, p. 150, No. 16.

I, 32. Acquired in 1917 by the British Museum. See *J.H.S.* XLI, 1921, p. 150, No. 14.

II, 9. In Ashmolean Museum, Oxford.

II, 12. Acquired in 1917 by the British Museum. See *J.H.S.* XLI, 1921, p. 150, No. 15.

¹ For shapes of these vases, and their numbers in the Hope Sale Catalogue, see *A.J.A.* XXI, 1917, pp. 412-414.

III, B. In Rhode Island School of Design, Providence, R. I.

IV, 1. In Metropolitan Museum, New York, N. Y.

V, 82. In Ashmolean Museum, Oxford.

The following Tischbein vases appear to have figured in the Hope Sale, in addition to the list given by me in 1917:

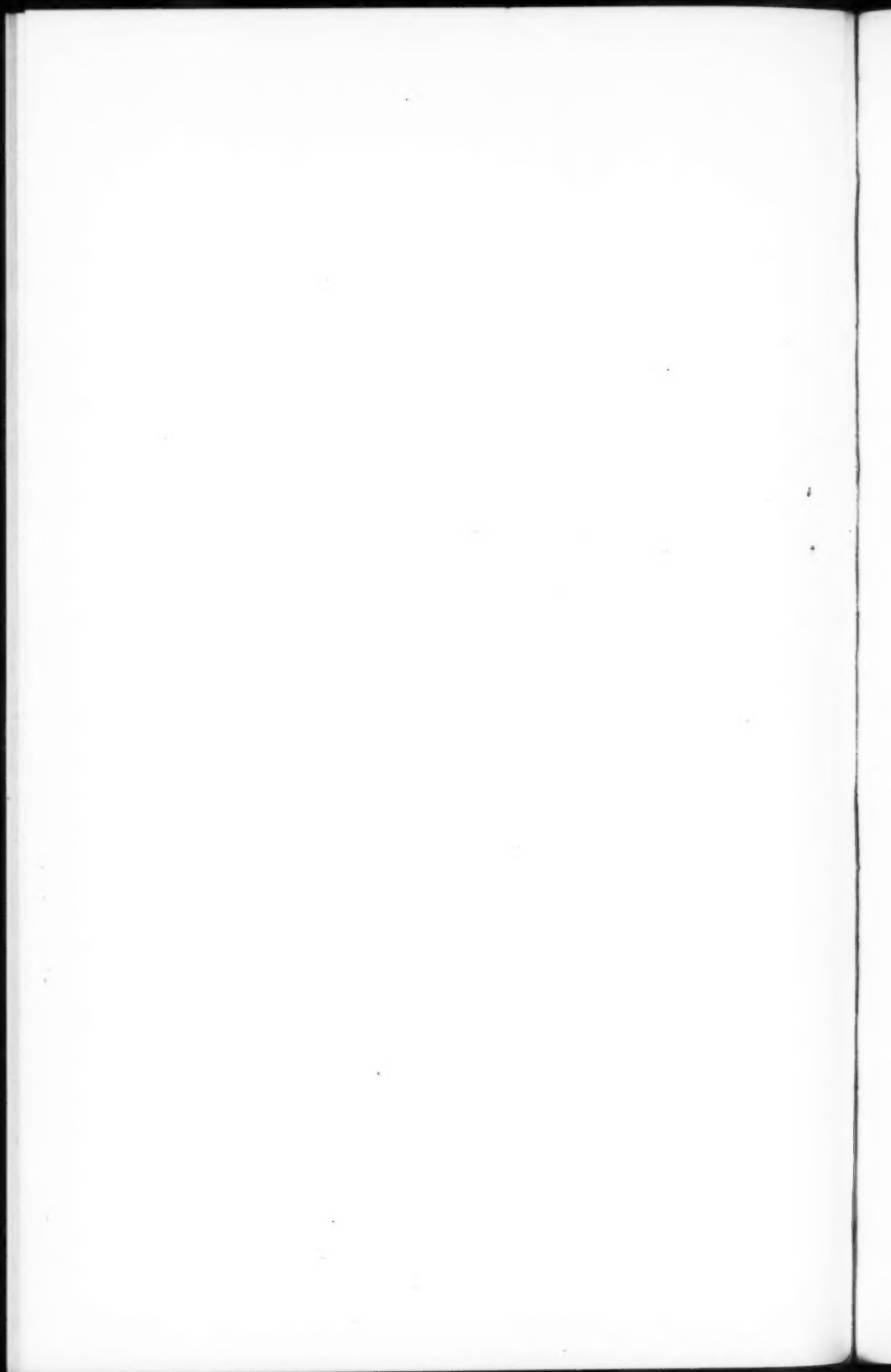
TISCHBEIN	HOPE SALE CAT.	SHAPE
I, 15.	86.	Amphora.
II, 46.	138,2.	Crater.
III, 17.	123,2.	Amphora.
III, 46.	125,1.	Crater. ¹
IV, 36.	138,1.	Crater.
IV, 57.	96,2.	Cylix.

In *A.J.A.* XXI, 1917, p. 413, for "Tischbein, III, pl. 9" read "Tischbein, III, pl. 10."

STEPHEN BLEECKER LUCE.

BOSTON, MASS.

¹ III, 46, is said to be the reverse of III, 45 (see Reinach, *Rép. des Vases Peints*, II, p. 319, No. 4) and III, 45 has this number in the Hope Sale Catalogue. Nothing is said there to disprove this being the reverse of III, 45, so it is fair to assume that Reinach is right, and that these two designs go together.



ARCHAEOLOGICAL DISCUSSIONS¹

SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN CURRENT PUBLICATIONS

SIDNEY N. DEANE, *Editor*

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GENERAL AND MISCELLANEOUS

The Home of the Indo-Europeans.—In a recent essay HAROLD H. BENDER reviews the problem of the original home of the Indo-Europeans. Whether Asia was or was not the "cradle of the human race" there is no convincing evidence that the neolithic Indo-Europeans lived in Asia. The influence of the Asiatic duodecimal system on European language may be traced, but does not prove the Asiatic origin of the people. The problem is best approached by a method of elimination. The universal existence of a word for honey in Indo-European languages shows that the early Indo-Europeans lived in a country where the honey-bee is found. This excludes a large part of Asia: the region of the Oxus and the Jaxartes and Turkestan. Names of flora and fauna in Indo-European languages indicate the origin of the people in a temperate climate. Although caution is required in the use of vocabulary as evidence, its cumulative force is considerable. In this argument the names for beech and birch trees play an important part. The beech to which the name was originally given is found in the central belt of Continental Europe. The silver birch does not grow in southern Europe, but is common in Russia north of parallel 45. Anthropological and archaeological data do not yet throw any certain light on the Indo-European question. We know that the primitive Indo-Europeans used the plow, and hence were an agricultural and not a purely nomadic people. From linguistic evidence we derive much information about the dwellings and life of the people. The recent discovery of a *centum* language in Central Asia has been adduced as an argument for the origin of the Indo-Europeans in Asia. But when we consider that our knowledge of this language (the Tocharian) does not go back of 500 A.D., it appears more probable that it was spoken by some branch of the race which had migrated into Asia. The home of the Indo-Europeans must be sought in an inland

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor DEANE, Editor-in-charge, assisted by Professor SAMUEL E. BASSETT, Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Dr. T. A. BUENGER, Professor HAROLD N. FOWLER, Dr. STEPHEN B. LUCE, Professor ELMER T. MERRILL, Professor JOHN C. ROFFE, Dr. JOHN SHAPLEY, Professor A. L. WHEELER and the Editors, especially Professor BATES and Professor PATON.

No attempt is made to include in this number of the JOURNAL material published after December 31, 1922.

For an explanation of the abbreviations, see pp. 128-129.

country where the honey-bee, and the beech and silver birch trees are found, not too far from the general line of delimitation between the *centum* and *satem* linguistic groups, not too heavily wooded for the primitive agriculture of a semi-nomadic people. The region which best satisfies these conditions is the plain of eastern central Europe. It is in this very district that the Lithuanians, who have preserved a more primitive form of Indo-European language than exists elsewhere, still live; they are in all probability a branch of the race which has never abandoned its original home. [*The Home of the Indo-Europeans*. By HAROLD H. BENDER. Princeton, 1922, Princeton University Press. 59 pp.; 6 figs.; maps. Svo.]

The Origin of Cremation.—In *Sitzb. Berl. Akad.* 1920, pp. 499–521, CARL SCHUCHHARDT discusses the beginning of the practice of cremation among European peoples. He concludes that it undoubtedly originated in Central Europe, probably at the end of the Stone Age. It probably came from that central Germanic community whose culture was marked by the form of pottery known as *Schnurkeramik*. Its development and first dissemination are to be dated at the beginning of the great emigrations of the Indo-Germanic peoples, and the custom of cremation, therefore, is a criterion in the study of the relations between these peoples.

The Origin of the Picture.—In *Z. Bild. K.* LVII, 1922, pp. 1–7 (16 figs.), G. VON LÜCKEN studies the first steps in the development of the picture. The Greeks were the first to create the picture as a clearly bounded, enclosed unit. In the archaic period, as well as in oriental and Egyptian art, only the long, continuous frieze, without accent or centre of interest, is to be found. This form prevailed even when the field decorated was wholly unsuited to it, as we see (in lieu of extant monumental paintings) in vase interiors and in temple metopes. The compositions have the appearance of having been cut out of a long frieze. They seem a part of the background, do not stand out of it and emphasize their independent significance. The change came shortly before the Periclean wars. The figure in the interior of the vase assumed a shape that made it stand out from the background, and a border was put around it to separate it from everything beyond its field and to make a *picture* of it. The metope was no longer decorated with uniform, upright figures, repeating the form of the triglyphs beyond; its figures were placed diagonally and treated as an independent group.

Stucco in Art.—In *Rass. d'Arte*, IX, 1922, pp. 175–184 (11 figs.), R. PARI-BENT outlines the intermittent use of stucco in the art of the ages. The earliest wall decorations of stucco that we find are in the necropolis of Memphis in Egypt, dating from the fifth and sixth dynasties. Then we find it again in Minoan Crete. The Greeks valued their beautiful and plentiful marble too much to use moulded stucco. But it was a favorite medium with the Etruscans, as we see in the famous tomb at Cerveteri. The most perfect adaptation of stucco was reached by the Romans, and the supreme example is the decorative stucco from a private Roman house on the Via della Lungara, now exhibited in the Museo Nazionale. Mosaic took its place in the Byzantine era, though there are a few exceptions, as in the case of the stuccoes of San Vitale and the Orthodox Baptistery at Ravenna. There are sporadic uses of it in the late Middle Ages, as at Cividale. In the Renaissance it bloomed again, and there are instances of its employment now and then, down to the present. In general,

it is a medium for festive art. It lends itself to the expression of graceful movement and elaborate ornamentation.

Ancient Methods of Coining.—Under the title 'Ancient Methods of Coinage' G. F. HILL, in *Num. Chron.* 1922, pp. 1-42 (pl.), gives much information prepared for a chapter in a projected work by him on ancient coinage. There is full discussion of the processes of the preparation of blanks, of moulds, of dies, with descriptions of the manner of actual casting and striking. The author doubts whether dies were ever cut with a drill, unless possibly sometimes for removing larger masses of metal. The work was done chiefly with punches and scorpers. But the ancients "understood the use of the hub, made of hard metal, carved with a positive design, and driven into the heated metal of the die, which could be afterwards hardened." The well-known painting in the house of the Vettii at Pompeii probably represents a goldsmith's workshop and not a mint. The reason for making coins with serrated edges, though much discussed, is still obscure. Earliest coins of this sort are from Macedonia (220-179 B.C.). A few were issued in Syria, and some (gold, electrum, and silver) by Carthage. Rome took up the fashion after these other nations had dropped it, confining the process to denarii, both pure and plated. In the Roman process the blanks were (usually, at least) cast plain, then serrated with a file, and then struck.

Ancient Water-clocks.—In *Sitzb. Mün. Akad.* 1920, Abh. 17, pp. 1-27 (5 figs.), ALBERT REHM publishes a fragment of a water-clock which was found in 1886 at Grand (Vosges), near the village of Le Cagnot (see *C.I.L.* XIII, ii, 1, No. 5055), and in connection with this discusses water-clocks in general. This particular fragment is part of the circular bronze dial of the clock. In front of this was, apparently, a wire net which turned so that the wires pointed to the numbers of the dial. The mechanism by which this was accomplished is discussed in connection with Vitruvius, IX, 8, the writings of modern investigators, Islamic water-clocks, and such remains of ancient water-clocks as are extant. The water was regulated by passing through three receptacles. In the Islamic clocks the pointer moved as the float sank in the cylinder (the water flowing out from it); in the ancient clocks it moved as the water flowed in and raised the float.

Manna, Nectar, and Ambrosia.—In *Proceedings of the American Philosophical Society*, LXI, 1922, pp. 227-236, PAUL HAUPT discusses the words Manna, Nectar, and Ambrosia. The manna that supported the Israelites in the wilderness was a nutritive lichen, especially the *Lecanora esculenta*. The words nectar and ambrosia appear to denote fragrant fat.

The Age of the Moon in Inscriptions.—ALBERTO GALIETI discusses one pagan and fourteen Christian inscriptions in which the age of the moon is used to fix the date and describes in detail the methods employed to determine missing chronological elements. (*B. Com. Rom.* XLVIII, 1920, pp. 73-136.)

The Cretan "Horns of Consecration."—A large number of cult objects of the Minoan age resembling horns were discovered by A. Evans in Crete, and were called by him "horns of consecration." This name is disputed by W. GAERTE, in *Arch. Rel.* XXI, 1922, pp. 72-98 (26 figs.). On the basis of the earlier forms of this object and of similar objects in Babylonian, Egyptian, and Hittite art, he holds that they represent, not two horns, but two mountains; and that they are symbols of the idea "earth," and represent a Cretan earth-

goddess, the counterpart of the Magna Mater of Asia Minor and the Greek Rhea.

Archaeology for Children.—A recent book by JENNIE HALL, entitled *Buried Cities*, is designed to attract the interest of children to the actual remains of ancient civilizations, as exemplified in the ruins of Pompeii, Olympia, and Mycenae. A simple description of Pompeii is preceded by a fictitious story relating to the place; Olympia is similarly treated. Each site is illustrated with numerous views of landscape, architecture, and objects of art. [*Buried Cities*. By JENNIE HALL. New York, 1922, Macmillan. 200 pp. 70 figs. 8vo. \$2.00.]

EGYPT

Purchase of a House in the Fourth Millennium B.C.—In *Sitzb. Mün. Akad.* 1920, Abh. 14, pp. 1-10, FR. W. VON BISSING discusses the inscription recording the sale of a house in the pyramid-city of Cheops (Sethe, *Sitzb. Sächs. Ges.*, phil.-hist. Klasse, 1911, pp. 135 ff.; Sottas, *Étude antique sur un acte de vente immobilière*, 1913). The price paid is ten *set*, i.e., ten cakes, but not actual cakes. Payment was made in three objects, of which one was a bed of éš-wood, one something of sycamore, and one of a plant called *jni*. The seller was Çenti, the buyer Kâ-m-ipu. Each brought his witnesses. Analogies are cited from other Egyptian documents.

A Monument of Amenhotep IV.—An Egyptian relief exhibited as a loan in the Ashmolean Museum and first published by F. L. Griffith in *J.E.A.* V, 1918, pp. 61 ff., is discussed in *Sitzb. Berl. Akad.* 1919, pp. 477-484 (fig.) by HEINRICH SCHÄFER. At the left the king Amenhotep IV is represented as standing in a building which is illuminated by the rays of Aton. At the right the king, surrounded by the rays of Aton, walks outdoors, preceded by a stooping priest and followed by another. The name of Akhenaton, which appears on the relief, takes the place of the erased name Amenhotep. Dr. Schäfer concludes that the relief dates from a time before the king changed his name, and the action pictured is a part of the mysterious "thirty years'" festival which he celebrated. The action takes place at Hermonthis, between a certain building and the sanctuary of Aton in the temple of Re. The relief has the characteristic style which we associate with this king, although it is earlier than his change of name. One of the inscriptions shows a first prophet of the king was appointed even in his life-time, an indication that Akhenaton followed his father's example in establishing his own cult.

A Study of Thoth.—Thoth, "the Hermes of Egypt," is the subject of a recent study by PATRICK BOYLAN. His conclusions are based not only on the Pyramid texts but on Egyptian literature of the Graeco-Roman period. He discusses the name of the god; his position in the legends of Osiris and Horus; his relation to the Enneads of Heliopolis; his association with Re in the solar barge; his symbols, his functions as a lunar divinity, as representative of Re, as founder of social order and ritual, as author of the "Divine Words" as the all-knowing god, the creator; Thoth in magic, as god of the dead, and in Egyptian ritual; his chief temples and shrines. In appendices a list of the names in which the name of Thoth appears is given, and his epithets and divine associations are discussed. [*Thoth, the Hermes of Egypt: A study of some aspects of*

theological thought in ancient Egypt. By PATRICK BOYLAN. London, 1922, Milford. 215 pp. 8vo.]

A Myth in a Demotic Papyrus.—An Egyptian myth tells how Tefnut, the daughter of the sun-god Re, alienated from her father and dwelling in the Nubian desert in the form of a lioness, is visited by Schu, the son of Re, and Thoth, who transform themselves into apes for the purpose, and by their use of magic and persuasion induce the goddess to return to Egypt. The myth originated in the tradition of the eye of the sun, sent out by Re to annihilate his enemies. A demotic papyrus of the second century of our era (*Leyden papyrus I*, 384) is an important contribution to the interpretation of this myth, and is discussed at some length by W. SPIEGELBERG, *Sitzb. Berl. Akad.* 1915, pp. 876-894.

Notes on Egyptian Religion.—In *Sitzb. Berl. Akad.* 1916, pp. 1142-1153, ADOLF ERMANN publishes several notes on Egyptian religion: (1) a myth of the origin of Thoth; (2) the origin of the title "Hand of God" sometimes given to Theban princesses; (3) some epithets of Apis and Mnevis; (4) the interpretation of Thoth and Horus as the heart and tongue of Ptah.

The Papyri and the New Testament.—In *Exp. Times*, XXXIII, 1922, pp. 343-349, E. S. FORSTER discusses the importance of the papyri found in the rubbish heaps of Egypt for the study of the New Testament. In the first place, they show that the Greek of the New Testament is not influenced by Hebrew or Aramaic; nor is it a peculiar dialect created by inspiration, but that it is the ordinary spoken Greek of the period. The New Testament is now put in its proper place as the greatest existing monument of popular *Koine*. Secondly, the papyri give us documents illustrative of countless passages in the New Testament, and enable us to reconstruct the historical environment of primitive Christianity.

Meteorology of Egypt.—In *Sitzb. Berl. Akad.* 1916, pp. 333-341, G. HELLMANN discusses the data on winds, rain and hail, and other meteorological phenomena of Egypt which are to be found in the Calendar of Claudius Ptolemaeus.

BABYLONIA, ASSYRIA AND PERSIA

Elam under the Kings of Ur.—During the period of the III Dynasty of Ur (2474-2382 B.C.) the land of Elam stood under Babylonian sovereignty. A large number of tablets are known both in Paris and in Constantinople which contain accounts of administrative expenses of Babylonian officials stationed in Elam. A selection of these tablets in autograph copy and translation is given by C. F. JEAN, *R. Assyr.* XIX, 1922, pp. 1-44.

Old Babylonian Contracts.—In *Publications of the Babylonian Section, University of Pennsylvania Museum*, VII, 2, 1922, pp. 113-226 (plates lxii-clxi), E. CHIERA gives in autograph, transliteration, and translation a large number of contract-tablets, belonging for the most part to the dynasties of Isin, Larsa, and Babylon. They contain contracts of donation, marriage, adoption, purchase, lease, loan, also promissory notes, receipts, partition documents, exchanges, redemptions, contracts, and legal decisions. The last class is the most interesting, since no records of this type have hitherto been published. Two new date formulae of the Isin Dynasty also appear. The work is provided with complete indexes of all the personal names that occur in the tablets.

Fate among the Babylonians.—In *Mitt. Vorderas. Ges.* XXVII, 1922, 2, pp. 1-64, C. FICHTNER-JEREMIAS discusses the Babylonian idea of fate under four main aspects: fate as determined by the gods, fate as determined for the gods, fate as determined by men, and fate as determined for men. Astrology disposed the ancient Babylonians toward a mechanical conception of the universe and philosophical determinism, but they escaped this extreme position by ascribing moral ideals to the gods. Thus the gods became the shapers of fate for moral ends, and were themselves subject to fate only to a limited degree. Men also had the power to a certain extent to shape or to circumvent their fates. Death, however, is the ultimate fate of all men, against which all human skill and wisdom are powerless. This thought gives a pessimistic tone to all Babylonian poetry and philosophy.

Divine Service in Early Lagash.—In *J.A.O.S.* XLII, 1922, pp. 91-104, S. MERCER gathers up the material concerning gods, temples, priests, sacrifices, altars, dedications, festivals, and ritual, in the old Sumerian kingdom of Lagash, from the earliest times down to the reign of Urukagina, when Lagash was captured by Lugalzaggisi.

Old Babylonian Epic Fragments.—Under the title *A Hebrew Deluge Story in Cuneiform* A. T. CLAY republishes in more exact transcription and translation a fragment of a large tablet, now in the possession of Mr. J. P. Morgan, that was first published by Scheil in 1898, containing a variant form of the Flood Story. He gives also new copies and translations of fragments of the Etana Legend and of the Adapa Legend, that also belong to the J. P. Morgan collection. In these tablets the author finds literary evidence that they are not Semitic translations of Sumerian originals, but that they are of Amorite origin; and that the Biblical Deluge Story was brought into Babylonia by the conquering Amorites rather than carried to Canaan by the conquering Akkadians, as is the current theory. An appendix gives in convenient form for comparison all the other forms of the Flood Story that are known in Sumerian, Babylonian, Assyrian, and in Berossus. There is also a chronological table of the earliest Babylonian dynasties that embodies the very latest discoveries in this important field of history. See the review by A. Ungnad, in *Z. Assy.* XXXIV, 1922, pp. 15-23; also A. H. Sayce in *Exp. Times*, XXXIV, 1922, pp. 76 f. [*A Hebrew Deluge Story in Cuneiform*. By A. T. CLAY, New Haven, 1922, Yale University Press. 86 pp.; 7 pls. Svo.]

Babylonian Astronomy.—In *Z. Assy.* XXXIV, 1922, pp. 54-78, E. MAHLER gathers data from the tablets which prove that the ancient Babylonians determined both the summer solstice and the autumnal equinox by astronomical calculation, but reckoned the winter solstice and the vernal equinox by counting 92 days from the other two fixed points.

The Babylonian Practice of Marking Slaves.—In *J.A.O.S.* XLII, 1922, pp. 80-90, Miss B. A. BROOKS gathers the passages in the Assyro-Babylonian literature that speak of marking slaves, and shows that it is impossible as yet to determine from these passages what the nature of the marking was, although apparently it was of a comparatively permanent nature.

A Late Babylonian Collection of Laws.—In *Sitzb. Berl. Akad.* 1918, pp. 280-297, BRUNO MEISSNER publishes a transliteration of a legal document of late Babylonian origin, now in the British Museum. It is an evidence of the fact that in the course of time the long-followed code of Hammurabi became

unintelligible to the people. The British Museum document is to be regarded as a tentative code rather than as one actually adopted. Dr. Meissner gives a translation of the work in parallel columns to the text, and adds textual and interpretative notes.

The New Assyrian Law-Code.—In *R. Assyr.* XIX, 1922, pp. 45-65, E. CUQ gives a translation and commentary on the law-code recently discovered by the German expedition at Ashshur.

A Book of Omens.—In *Sitzb. Berl. Akad.* 1921, pp. 319-324, BRUNO MEISSNER publishes a translation of a late Babylonian text, dating from the period of Nebuchadnezzar or from a somewhat later time, interpreting the ominous significance of a long series of involuntary motions of the head, eyes, nose, lips, tongue, chin, etc.

An Elamite King in India.—In *J.A.O.S.* XLII, 1922, pp. 194-197, H. K. DEB points out that the founder of the dynasty of Magadha to which Bimbisāra, the contemporary of Gautama Buddha belonged, bore the Elamite name of Śiśunāka which we meet frequently in the Assyrian inscriptions. According to the Ceylonese tradition, he lived about 705 B.C., and was thus a contemporary of the Assyrian kings Sargon and Sennacherib, both of whom waged constant war with Elam. It seems reasonable to suppose that this Śiśunāka was an Elamite refugee or adventurer who, forced out of his own country by the Assyrians, founded a dynasty in Northern India.

Aramaic Inscriptions.—In *Sitzb. Berl. Akad.* 1919, pp. 1042-1051 (2 pls.), P. JENSEN discusses a number of Aramaic inscriptions from Assur and Hatra, dating from the last period of the Parthian kingdom and the early Sassanid period. Most are graffiti on plaster, and the greater number are memorial inscriptions. Their epigraphic and linguistic characteristics are stated, and special attention is given to personal names and names of deities which occur in them.

Allah and the Idols.—In *Arch. Rel.* XXI, 1922, pp. 99-121, C. BROCKELMANN denies that Allah, the supreme God of Muhammad, was originated by him, or borrowed from Christianity or Judaism, or developed out of Hubal, or some earlier divinity of heathen Arabia; and maintains that both the name and the idea had already been developed in heathen Arabia before the time of Muhammad. Allah belongs to the type of "creator gods" that have arisen in the midst of polytheism in many parts of the world. He is to be compared with *El-'olam* and *El-'elyon* in the Hebrew patriarchal tradition.

SYRIA AND PALESTINE

Geography of Ancient Canaan.—The fourth volume of *Early Egyptian Records of Travel*, by DAVID PATON, Princeton University Press, 1922, contains the geographical lists of Thutmose III of the Eighteenth Dynasty, with full critical apparatus, and comparative tables of equivalents in the Tell el-Amarna letters, the Old Testament, the Assyrian inscriptions, and the classical geographers. It is an invaluable collection of material for the study of the earliest geography of Palestine.

The Epigraphy of Jewish Coinage.—In *Pal. Ex. Fund.* LIV, 1922, pp. 154-156 S. RAFFAELI maintains that the variations in the forms of the letters on Hebrew coins of the period beginning with the Maccabees and ending with Bar-Kochba

are due to the fancies and whims of engravers, and that all efforts to date these coins on the basis of these epigraphic peculiarities are without foundation.

Evidence of an Earlier Pronunciation of Hebrew than the Masoretic.—In *Z. Alttest. Wiss.* XXXIX, 1922, pp. 230-239, P. KAHLE shows that the Septuagint, Origen, Jerome, and metrical considerations, demand a different pronunciation of Biblical Hebrew from the traditional one embodied in the Tiberian and Babylonian systems of vowel points that were added to the consonants in the sixth century after Christ. He calls attention to some fragments from the Geniza in Cairo that contain an older system of vocalization. This distinguishes only six vowels, *ā, a, e, i, o, u*, and it omits consistently an unaccented final *ā*.

The Date of the Biblical Chronicler.—In *J. Bibl. Lit.* XL, 1921, pp. 104-124, W. F. ALBRIGHT attacks the current view that the Chronicler lived in the Greek period, after 300 B.C., and assigns him to a date between 400 and 350 B.C. Ezra lived after Nehemiah, and is to be assigned to the same date. There is no difficulty, therefore, in reviving the traditional theory that Ezra is identical with the Chronicler, a view that is sustained by the close resemblance between the extracts from Ezra's autobiography and the sections written by the Chronicler.

New Light on the Old Testament from Cuneiform Sources.—In *Z. Alttest. Wiss.* XXXIX, 1922, pp. 144-160, A. JIRKU gathers up a number of points in which the recent discoveries at Ashshur and at Boghazkeui have illuminated the meaning of Old Testament passages. Some of these are: the epistolary style in the historical books, the discovery of Deuteronomy in the Temple, the recovery of the fugitive prophet Uriah out of Egypt by King Jehoiakim, the treaty between Jacob and Laban, the meaning of the pillar in the narrative of Joash's coronation, the use of the plural *Elohim* as an equivalent of the singular *El*, "god," Beth-el as the name of a deity in the formula *El Beth-el*, the deification of the king, and particularly the much-discussed fourteenth chapter of *Genesis*. Jirku claims that the archaeological evidence favors the view that this chapter is derived from a Palestine cuneiform source, but that it does not belong to the age of Hammurabi, but to the age of Hittite sovereignty in Syria.

The Languages of the Boghazkeui Inscriptions.—Eight languages are represented in the Boghazkeui inscriptions: the Sumerian, the Accadian, the Kanesian (hitherto called Hittite), the early Indian, the Harric, the Proto-Hatti, the Luvic, and the Bala. The evidence of the inscriptions on the character of these languages is discussed by E. FORRER in *Sitzb. Berl. Akad.* 1919, pp. 1029-1041. He deals also with their geographical distribution.

Indian Words for Numbers in the Boghazkeui Texts.—In *Sitzb. Berl. Akad.* 1919, pp. 367-372, P. JENSEN discusses certain words for numbers which occur in the cuneiform Hittite texts of Boghazkeui, and concludes that they are Indian equivalents for 3, 5, 7, and 9. The rendering of these names in the Hittite cuneiform indicates derivation from an early form of the Indian language. It is, therefore, probable that the names of Aryan gods found in the same texts are of similarly early form. They constitute an interesting proof of the influence of ancient India on Asia Minor and neighboring regions.

The Treaty of Rameses II with Hattusil of Hatti.—In *Sitzb. Berl. Akad.* 1917, pp. 282-295, BRUNO MEISSNER presents a transcription of the treaty between Rameses II and Hattusil, king of the Hatti, as found at Boghazkeui, together

with a translation and with the parallel passages from the Egyptian version of the document as translated by Professor Breasted in *Ancient Records of Egypt*, III, section 373 ff. Dr. Meissner adds some notes on linguistic points and on the historical interest of the Hittite version.

ASIA MINOR

Ephesus and Clarus.—The two great religious centres of Northern Ionia and their respective cults are the subject of an extended and thoroughly documented study which has recently been published by CHARLES PICARD, the present Director of the French School at Athens. In a brief space it is possible only to suggest the significance and scope of this monumental work. The introduction shows the close association of the cult of Artemis at Ephesus with that of Apollo at Clarus, and the extent of the influence of both cults; it reviews the history of archaeological exploration on the two sites, and outlines the general plan of the author's presentation of his subject. In the following chapter the successive temples at Ephesus, and the buildings at Clarus are described. Next the administrative staffs of the two temples are discussed. A third chapter is devoted to the important priestly offices—the Megabyzus, the priestesses, and the Essenes of Ephesus; the priest of Apollo, the thespioide, and the prophet at Clarus. The subordinate offices of the temple service are then considered: the functionaries who cared for the sacred wardrobe and ritual objects, the sacrificial assistants, and the special service of the oracle at Clarus. The measures by which Greeks and later Romans endeavored to reform these largely oriental forms of religion through changes in the priesthood are described. Another chapter deals with the Ephesian Curetes, with the mysteries celebrated at Ephesus and Clarus, and with the great festivals associated with both shrines. In the sixth chapter M. Picard describes the liturgies of the two temples, and discusses the myths associated with the cults; in the seventh he traces the evolution of the artistic types of the two deities, especially of the Ephesian Artemis. The last two chapters review the religious history of Ephesus and Clarus chronologically: Chapter VIII from the primitive Creto-Carian period to the age of Alexander; Chapter IX from the period of Alexander through the third century of the Roman Empire. The book is provided with a full index. [*Ephèse et Clare: Recherches sur les sanctuaires et les cultes de l'Ionie du Nord.* Par CHARLES PICARD. Paris, 1922, E. de Boccard. xlvii, 786 pp. 8vo.]

Inscriptions from Sinope.—In *B.C.H.* XLIV, 1920, pp. 354–361 (3 figs.), A. SALAČ notices three inscriptions from Sinope, now in the Museum of Constantinople, that had been previously published by Théodore Reinach in *R. Arch.* 1916, I, pp. 329 f., Nos. 7, 8, 9, and one of which had been first published, and one measured and mentioned, by D. M. Robinson in *A.J.P.* 1906, p. 448. A correct transliteration is given in each case, correcting errors in previous publications. The writer considers the measurements given by Robinson to be more accurate than those of Reinach.

An Oracular Text of Apollo Clarius at Pergamon.—In *B.C.H.* XLVI, 1922, pp. 190–197, C. PICARD republishes an inscription found at Pergamon in 1818, (*I.G.* II, 3538) and now lost, which he seeks to refer to the oracle of Apollo Clarius, the centre of which was at Colophon on the Sea. He suggests a num-

ber of new readings, based on those of an inscription found by himself and T. Macridy in 1913, not yet published in full, and still *in situ* at the shrine itself. The inscriptions found dealing with this oracle are all of, or after, A.D. 132. The Pergamene text can be dated with relative accuracy at about 166, as it refers to a plague, which can be no other than the plague which ravaged the eastern provinces of the Roman Empire during the reign of Marcus Aurelius, and reached its height in that year.

GREECE

ARCHITECTURE

The Temple of Athena Areia at Plataea.—In *B.C.H.* XLIV, 1920, pp. 160–169, A. DE RIDDER discusses the temple of Athena Areia at Plataea, which, according to Plutarch, was built and adorned with the eighty talents awarded the Plataeans after the battle of Plataea in 479 B.C. The excavations carried on by the American School in 1890–91 failed to reveal its location, which remains unknown. The arguments for and against this temple being one of small size are reviewed, and the conclusion is reached that it was a temple of average size, but, nevertheless, larger than the Theseum at Athens.

The Orchestra Terrace of the Aeschylean Theatre.—JAMES T. ALLEN has called attention to a recent statement of Dr. Dörpfeld regarding the diameter of the Aeschylean orchestra at Athens. In reviewing Professor Allen's *The Greek Theatre of the Fifth Century B.C.* Dr. Dörpfeld remarks that although this dimension is given in the text of his *Das griechische Theatre* as 24 metres, the actual measurement is about 26 metres, and the orchestra is drawn to this scale in Plates I and III of the same book. Many critics have followed the statement in Dörpfeld's text without observing its inconsistency with the drawing. Professor Allen shows that a circle which is to take in the three points identified as parts of the original circle must have a diameter of about 26.84 metres, identical with that of the fourth century orchestra as determined by a circle just inside the row of thrones. His theory of the relation of the fourth century theatre to the Aeschylean building is not invalidated by the discrepancy between Dörpfeld's text and plates, since his conclusions were based on the drawing and not on the text. [*The Orchestra-Terrace of the Aeschylean Theatre.* By JAMES T. ALLEN. (University of California Publications in Classical Philology, VII, No. 2.) Berkeley, California, 1922, University of California Press. Pp. 121–128; 3 figs. 8vo.]

Reconstruction of the Altar of Chios at Delphi.—In 1920, the demarchy of Chios voted an appropriation for the reconstruction of the altar dedicated by the Chians in the precinct of Apollo at Delphi, about 475 B.C. The work was entrusted to J. REPLAT, who reports upon it in *B.C.H.* XLIV, 1920, pp. 328–353 (2 pls; 23 figs.). Work was begun in July 1920 and completed as far as possible by the end of September of that year. The original construction of the altar was thoroughly examined, course by course, and plans were made of each course. After an analysis of these plans, restoration of missing parts was made with a stone that will remain quite distinct from the original material. The two plates (Fig. 1) that accompany the article show the altar as it looks at present.

The Sanctuary of Apollo at Delos.—In *B.C.H.* XLV, 1921, pp. 174–241 (7 pls.; 5 figs.), F. COURBY discusses the topography and chronology of the sanctuary of Apollo at Delos. He first considers the three temples in a row at the eastern end of the enclosure. Of these the northern one, the foundations of which are of poros, belongs to the archaic period, and was the temple of Apollo *par excellence* until the completion of the greater temple at the other end of the row. This temple was begun about 450 B.C., but the archaeological and epigraphic evidence proves it to have been left unfinished for at least a century. Construction was resumed, according to the inscriptions, in 302 B.C., and lasted till about 246, after which it was used for religious purposes. Further



FIGURE 1.—ALTAR OF THE CHIANS: DELPHI.

construction work was carried on in the period 193–180 B.C. The older temple was rebuilt between 282 and 274 B.C. The central temple is identified with that “of the Athenians.” The remains suggest the end of the fifth century as the date of its construction, and a study of the inscriptions enables us to date its consecration accurately, in the year 417, the year, in all probability, when Nicias went on the sacred embassy to Delos. The precinct of Artemis, which is included in the sanctuary of Apollo, is next discussed, and the very early existence of her cult, shown by the discovery of a building of the “megaron” type on this site, is proved. The great temple of Artemis, of the Ionic order, is placed at the end of the fifth century. At the beginning of the third century there is evidence of great building activity in this precinct, which had remained untouched from the time of the building of the great temple. The first of the later buildings is the large stoa at the north and east of the precinct. In the middle of the second century a new temple was built to replace an archaic

structure. It is believed that this is the temple of Leto. At this same period the small western stoa was built. At the south of the sanctuary of Apollo are the buildings and monuments dedicated by the Naxians. The hall of the Naxians dates from a very early period, and was originally of wood. The present remains go back to the beginning of the sixth century B.C., when the hall was entirely rebuilt of Naxian marble, at the same time that the colossal statue of Apollo, the base of which is still in situ, was set up. A colonnade was added to the pronaos at some time before the second century B.C., and, a little later, to the opisthodomos as well. The stoa that encloses the southwest corner of the sanctuary of Apollo, was built by the Naxians before 250 B.C. The activity of the Naxians at Delos is once more confirmed by these investigations.

The So-called "Hall of the Bulls" at Delos.—In *B.C.H.* XLV, 1921, pp. 270-294 (fig.), P. L. COUCHOU and J. SVORONOS propose a new function for the "Hall of the Bulls" at Delos, which has remained unexplained ever since Homolle's theory placing the Horned Altar there has had to be abandoned. The writers believe that this building contained a ship of war, consecrated in the precinct of Apollo. This is suggested not only by the marine character of the exterior decoration, but also by the similarity in dimensions of this building to the ship-houses found in Zea harbor at Piraeus; although this is for a ship considerably larger. An attempt is made to identify this building with the one erected to house the ship consecrated to Apollo by Antigonus Gonatas after his victory over Ptolemy in the battle of Cos, in the third century B.C. This corresponds very well with the architectural evidence, which tends to place the building in this period. A little later, Antigonus built the "Portico of the Horns" and between these two buildings set up monuments of his ancestors, human and divine. The writers take up the question of the cult of the Sacred Ship. They believe that this ship was worshipped, adducing as proof the base found in the northern part of the building, previously thought of as that of the Horned Altar, but which they conjecture to have been that of a votive prow of a ship. An attempt is made to trace this cult to a very remote antiquity, and to find evidence for its existence in Minoan times, by citing the sarcophagus from Hagia Triada as evidence. The victims sacrificed to this cult were bulls, and this accounts for the bulls on the capitals of the columns of the building. Evidence is presented to show that the cult of the Sacred Ship was observed at Delos at a very remote period, and may have antedated the worship of Apollo.

SCULPTURE

The Minoan Taurocathapsia in Bronze.—Sir ARTHUR EVANS has published a unique representation in bronze of the group of a galloping bull with an acrobat turning a backward somersault over its back, which is familiar from frescoes, seals and other works of Cretan origin. The bronze, which measures .114 m. in height and .156 m. in length, shows great technical skill, being cast solid and in one piece, in spite of the complicated design, and with no marks of the seams of a mould, although otherwise roughly finished. A dowel by which it was set into some base is preserved under the forefeet. The "flying gallop" attitude of the animal marks it as a sacred bull, and the acrobatic feat, here performed by a male figure, although boys and girls alike took part in it, must

have had a religious significance. It was gone through before crowds of spectators, in an arena surrounded by barriers or "grand stands." The action consisted in facing the charging bull, perhaps by a sudden dash from the side, seizing the horns with both hands, then with a spring aided by the upward toss of the animal's head, swinging the body through the air until the feet touch the haunches of the bull, then letting go the horns, straightening the figure up and leaping off, to be caught in the outstretched arms of an assistant. The moment represented in the bronze is that when the feet have touched the back of the bull and the body is still curved violently backward, the hands just letting go the horns. The lower part of the legs is missing and the arms are broken at the elbow, but what remains of the figure is supported by the hair, which falls down in a long tress or cue upon the head of the bull. The bull is not the native shorthorn breed, *bos creticus*, but the typical long-horned wild ox of Europe and western Asia, *bos primigenius*. The bronze dates from about 2000 B.C. The bull-grappling feats which occur in Greek legends and in many forms of art seem all to have a Minoan, and probably back of that, an Asiatic origin. (*J.H.S.* XLI, 1921, pp. 247-259; 11 figs.)

The Chariot Relief of the Acropolis.—R. DEMANGEL has renewed the discussion of the archaic relief in the Acropolis Museum representing a figure mounting a chariot. The modelling of the limbs, the contours as seen through or suggested by the drapery, and the elaboration of the dress itself indicate that this person is a female figure. It is probably the goddess Artemis. With the exception of the fragmentary figure of Hermes, which is similar in technique to the chariot figure, the fragments which Schrader associates with this relief have nothing to do with it. The often-defended theory that the relief is a part of the frieze of the Pisistratean Hecatompodon cannot be sustained. Its dimensions, the lack of any traces of fire, and the lack of other fragments, are all against the probability of this hypothesis. Its exact purpose can never be ascertained; but it may have had a decorative function in connection with the altar of Artemis Brauronia, or with the wall of her precinct. (*R. Ét. Anc.* XXIV, 1922, pp. 187-201; pl.; 3 figs.)

An Archaic Bronze Statuette.—In *B.C.H.* XLIV, 1920, pp. 101-107 (2 pls.; fig.), F. POULSEN publishes a small bronze statuette of a youth, recently acquired by M. Herman Heilbuth, a Danish merchant, at Salonica (Figs. 2 and 3). It is in perfect preservation, save that the left arm below the elbow is lost. The left leg below the knee, which was broken off, has fortunately been preserved. The right leg is advanced in this statue, as in the case of some of the later archaic "Apollos," such as the one at Girgenti, and the one in the Museum of the Acropolis at Athens. The writer classes this statuette as an important example of the work of the Samian or Ionian school of sculpture of the late sixth or early fifth century B.C.

The Sculptured Bases from the Themistoclean Wall.—A long account of the sculptured bases which have already been noticed in *A.J.A.* (XXVI, 1922, pp. 355-356, and figs. 3-8) is given by A. PHILADELPHUS in *B.C.H.* XLVI, 1922, pp. 1-35 (7 pls.; 9 figs.). They were found in February 1922. Photographs are given of these reliefs in their places in the Themistoclean Wall, and of the tops and bottoms of Bases I and II, showing that they belonged to stelae, and themselves rested on pedestals (cf. *A.J.A.* XXVII, 1923, pp. 23 f.). This was also undoubtedly true of Base III as well. They were all intended to rest against a

wall, as in no case is the back side decorated. Base I (*A.J.A.*, *loc. cit.*, figs. 3-5) recalls vividly the Attic red-figured vases of the style of Andocides and Euthymides. The background was originally painted red. The relief in front is that of the wrestlers, and recalls not only the vases, but the wrestling scene in the Tomba degli Auguri at Corneto. The relief on the left is that of the six nude ball-players. These men are engaged in throwing and catching a ball, in two teams of three men each. The relief on the right represents a cat-and-dog fight. Base II (*A.J.A.*, *loc. cit.*, figs. 6-8) is of earlier and inferior workmanship, and the influence of Ionian art is very clearly shown, especially in the treatment of the hair. The technique recalls the Ionian and early Attic



FIGURE 2.—ARCHAIC BRONZE STATUETTE FROM SALONICA.

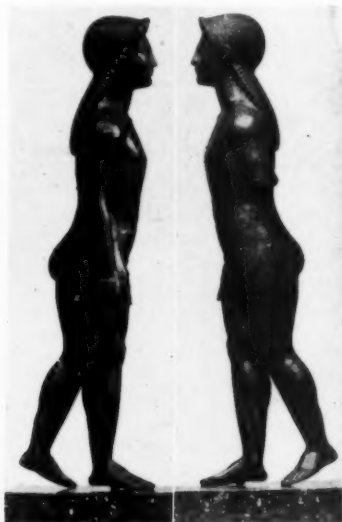


FIGURE 3.—ARCHAIC BRONZE STATUETTE: PROFILE.

black-figured vases. On the front is the already well known "hockey game" relief, of which there is no parallel extant in Greek art. The writer makes no attempt to identify this game with any game already known by literary sources. On the sides are the chariot scenes. Base III had no sculptured decoration, but a painting on the front. This decoration was purposely removed, perhaps because it commemorated some person whose memory was odious to the Athenians, but more probably, according to the writer, by the Persians at the time of the capture of Athens. There can be made out the figure of a woman (?) seated on a throne. Along the left side of this face ran the inscription, partly obliterated, "Ἐρδωτος καὶ τὸνδ' ἔρωλε. At the right was another inscription, of which there is too little to allow any certain restoration. The theory is advanced that the figure was that of Athena Ergane, a statue

of whom, by Endoeus, was seen by Pausanias. It is suggested that the discovery of this base, with this female profile, makes it possible to attribute to Endoeus a statue of Athena in the Acropolis Museum, No. 625. Although Endoeus was known to be a sculptor before this signature was found, this is his first appearance as a painter, and, furthermore, no painting has hitherto been discovered with the signature of an artist whose name was already known. By the forms of the letters, and especially the use of the four-barred sigma, the activity of Endoeus is dated 500-475 B.C. A shorter account of the reliefs is given by the same author in *J.H.S.* XLII, 1922, pp. 104-106 (2 pls.).

An Asclepius by Bryaxis.—Starting from a very fine colossal head at Alexandria (Fig. 4) which lacks the greater part of the hair and beard, and its likeness to the best copies of the Sarapis of Bryaxis and to the Blacas head from Melos in the British Museum, J. Six conjectures that Bryaxis made an Asclepius as well as a Sarapis for Ptolemy's capital. He was a native of Caria and one of the four famous sculptors of the Mausoleum, and he is known to have made colossal statues of gods in bronze and marble for Rhodes and Cnidus, while a Coan silver coin of the second century B.C. showing a statue much like the statuettes of the type to which the Melos head belongs, suggests that he also made an Asclepius for the chief sanctuary of the god at Cos. These, with the Megarian statue mentioned by Pausanias and the Aesculapius mentioned by Pliny, seen possibly in a Roman copy in the Pamfili collection, would make four statues of the god, with slight variations, by the same artist, a not unexampled duplication. (*J.H.S.* XLII, 1922, pp. 31-35; pl.; 3 figs.)

The Lateran "Sophocles."—In *J.H.S.* XLII, 1922, pp. 50-69 (11 figs.), T. REINACH shows that the name of Sophocles, given to the fine draped statue from Terracina which has stood in the Lateran Palace since 1839, is purely fanciful; that the statue is a generalized, not an individualized, portrait; that all the portraits that have come down from ancient times as those of Sophocles are of a different type, more suitable to the character of the poet; that the attitude of the statue is that of an orator, distinguished and self-confident; that the method of wearing the mantle, covering the right arm, was antiquated in the fourth century and only assumed by Aeschines through affectation; that it was of the style seen in a bronze statue of Solon set up in the public square of Salamis about 391 B.C. and almost certainly in a famous statue of an orator by Cephisodotus, the father of Praxiteles; and that several replicas of the head of the Lateran statue have come down to us from ancient times designated as



FIGURE 4.—HEAD OF ASCLEPIUS:
ALEXANDRIA.

Solon. All this is evidence of the strongest kind that we have in the statue of the Lateran a copy of a bronze statue of Solon, by Cephisodotus, which was set up in Salamis early in the fourth century. Thus the same artist, midway between Phidias and Praxiteles, whose Eirene and Plutus became the type of the Christian Madonna, in creating the first and finest commemorative portrait statue of Greek sculpture, gave us also the prototype of the figure of Christ the Teacher.

The Bronze Relief at Delos.—In *B.C.H.* XLV, 1921, pp. 242-269 (2 figs.), R. VALLOIS republishes the bronze relief found at Delos in 1908, and already published by F. Courby in *Mon. Piot*, XVIII, fig. 2. This relief belongs on one of a pair of marble stelae now standing in front of the south wall of the Agora, of almost equal dimensions, and in each case containing depressions into which bronze reliefs were inserted. These stelae are mentioned in an inscription of 156-5 B.C., together with the reliefs upon them, as having been part of the contents of the Temple of Agathe Tyche, which was built, according to inscriptional evidence, at the beginning of the second century B.C. This sanctuary was in the neighborhood of the Cynthian hill, not far from the Heraeum. The writer questions the interpretations of the subject of this relief given by Courby (*loc. cit.*), and Sieveking (Brunn-Bruckmann, pl. 621, p. 3) and declares it to be an offering to Agathe Tyche with Artemis as the sacrificer. He considers it certain that the relief of the companion stele had a similar scene, with Dionysus in that rôle, since the cult of Agathe Tyche was closely allied to those of Artemis and Dionysus.

Hellenistic Sculpture from Cyrene.—The most important of the sculptures in the round from Cyrene, both those found since the Italian occupation of the Tripolitana in 1911 and those brought to the British Museum by Smith and Porcher's expedition of 1861, are illustrated and discussed by G. BAGNANI in *J.H.S.* XLI, 1921, pp. 232-246, (2 pls.; 5 figs.). Of the former, a nude statuette group of the Graces (see *Not. Arch.* II, 1916, pp. 51 ff.; *A.J.A.* XXVI, 1922, p. 372), which is shown by the position of the head of the central figure to be copied from a relief or painting, has all three figures in the exact position of the very beautiful Aphrodite Anadyomene, the only piece of sculpture from these excavations to be carried to Rome. (See *J.H.S.* XL, pp. 203 ff.; 2 pls.) The original of both works, possibly a painting by Euphranor, shows no trace of the influence of the Aphrodite of Cnidus and was therefore earlier than 350 B.C. Two other groups of nude Graces, one being also from a relief or painting earlier than the Cnidian type and one merely three copies of the Cnidus figure joined together, indicate that there was no standard treatment of this subject. The Anadyomene is of the same serious and dignified feminine type as the Venus of Melos, with which the Cyrene Apollo of the British Museum has already been compared. All three statues are from the hand of an artist or artists of the highest order, capable of producing an original masterpiece from an existing type. The two statues from Cyrene, which are quite possibly from the same hand, were probably executed after the middle of the second century B.C., as the temple in which they stood was rebuilt after a fire in late Hellenistic times. Other works from the Italian excavations are a colossal statue of Alexander from the Thermae, with a fine portrait head and a combination of Polyclitan and Lysippean traits in the figure which agrees with its probably Ptolemaic date, and a colossal Zeus from a temple near the agora, with which two statues

of the Smith and Porcher finds, an Athena and another female figure, both headless, seem to belong. The Zeus and Athena are by the same sculptor and of late Hellenistic date; the other figure, possibly a portrait of Sabina, was added to make a triad in the time of Hadrian, to whom the base was dedicated in 138 B.C. A very perfect statue of Eros from the Thermae is valuable as showing the exact ancient method of stringing the bow by bracing one curved end against the legs. (See *Not. Arch.* II, 1916, pp. 42 ff.; *A.J.A.* XXVI, 1922, pp. 371 f.)

VASES

Prehellenic Vases from Thera.—The French School at Athens has had in its possession for many years a collection of Prehellenic vases from Thera. These vases, discovered in excavations made in 1867 and 1870, under the lava of later volcanic disturbances, at the modern Akrotiri, had never been properly published, although their existence was known, and although they are referred to in the work of Dumont and Chaplain (*Céramiques de la Grèce Propre*, I, p. 20). Their publication is now undertaken by L. RENAUDIN in *B.C.H.* XLVI, 1922, pp. 113-159 (2 pls.; 30 figs.) Several of the most interesting of the vases have disappeared in the years since their discovery. All of them are proved by the clay used to be of local manufacture, and are much influenced by the contemporary Minoan and Mycenaean civilizations. Most of them are wheel-made, and one of them may have been made in a mould. Three kinds of clay are used; a reddish brown, a brown, and a yellowish grey. All of these clays contain bits of crystal and sometimes fragments of lava, showing them to be local. Most of the vases have received an application of color, either by dipping, or by the use of the brush, which is dull, except for the black varnish. Five classes of vases are distinguished: (1) Undecorated vases of coarse clay; (2) undecorated vases, covered with a uniform color; (3) vases with painted decoration directly on the clay; (4) vases on which the decoration is painted on a ground of applied color; (5) vases on which the decoration is painted on a slip. The forms resemble those of Crete in the end of the Middle Minoan period, all the more common forms of that and the following period being found here. Very unusual are vases of the "Schnabelkanne" form with protuberances on the body in the form of female breasts. A stand of pottery exists, analogous to those of stone found at Gournia. The decoration, where it exists, is usually of vegetable and flower forms, but there are also several specimens with animal decoration, the most interesting being two pitchers, one with a design of birds, and the other with a design of wild goats, in both cases against a background of vegetable patterns. These vases are dated in the period beginning with Middle Minoan III, and going through Late Minoan I, and show no mere slavish dependence on the Cretan or Melian models, but a distinct originality on the part of the Thera makers. The article ends with a catalogue of the collection, which numbers sixty-six examples.

The Geometry of Greek Vases.—The Museum of Fine Arts in Boston has published a study of the proportions of Greek vases embodying a detailed analysis by LACEY D. CASKEY of some 185 Attic vases in the collection of the Museum, in accordance with the principles of proportion discovered by Mr. Jay Hambidge. A profile drawing of each vase, together with its enclosing rectangle, shows significant subdivisions and diagonals of the area indicated

in dotted lines. Each figure is accompanied by explanatory text calling attention to significant features of the design of each shape, and stating the dimensions numerically. These individual analyses are preceded by an introduction which presents the general results of Dr. Caskey's study. Nine of the vases investigated have proportions which can be expressed in whole numbers. The great majority have proportions which cannot be expressed in linear units, but can be analyzed in terms of rectangles derived from the square, either (1) rectangles derived from the diagonal of the square, or (2) rectangles based on the diagonal of two squares (the so-called "whirling square" rectangle and its combinations). Diagrams illustrate groups of Boston vases which are contained in whirling square rectangles or combinations of them, or in other common rectangles. The fifty-four areas defined in the introduction occur more than two hundred times on the vases analyzed. Since two or more often occur on the same vase, and 185 vases in all were analyzed, it appears that the total number of areas is at least 90. The question of the significance of the occurrence of the "dynamic" proportions is, therefore, naturally raised. Attention is called to the fact that the measurements of vases which show these proportions actually confirm the rectangles used in their analysis; allowances for error of more than two millimetres are only 68, while 195 examples show an error of less than two millimetres. That a vase taken at random can be enclosed in a rectangle of dynamic symmetry is not in itself significant; but the number of vases which conform to a limited number of simple rectangles is of importance, as well as the fact that the details of the construction of these vases can be expressed in terms of the same rectangles, and that these details conform to a small number of simple ratios. The conclusion of the introduction is a reply to Professor Rhys Carpenter's criticism of the theory of dynamic symmetry (*A.J.A.* XXV, 1921, pp. 18 ff.). Mr. Caskey finds that in returning to the Vitruvian theory of proportion, Mr. Carpenter is obliged to admit a larger margin of error than is demanded by dynamic analysis. The point is illustrated by a comparison of Mr. Carpenter's analysis of two scyphi in Boston and New York with the dynamic analysis of the two vases; and again by the application of the two methods to the beautiful Brygan cantharus in Boston, which conforms with striking exactness to the dynamic system. It appears that the Athenian potter used drawings in the construction of his vases. But he need not have made them on the expensive parchment to which Professor Carpenter objects; a smooth slab of marble would have served his purpose. A critical review of this book will be published in the *JOURNAL* at a later date. [*The Geometry of Greek Vases.* By L. D. CASKEY. Museum of Fine Arts, Boston, Communications to the Trustees, V. Boston, 1922. Museum of Fine Arts. xii, 235 pp.; numerous drawings. 4to. \$5.00.]

Greek Vases of the Glyptothek Ny-Carlsberg.—Under the title, *Vases Grecs récemment acquis par la Glyptothèque de Ny-Carlsberg* (*Kgl. Danske Videnskabskabernes Selskab*, V, 2, 1922, 27 pp.; 11 pls.) F. POULSEN publishes a small collection of vases recently acquired by that museum. The list includes two Attic Geometric, two Cypriote, twelve Attic black-figured, five Attic red-figured, and three South Italian vases, making a total of twenty-four. All of these vases are illustrated in the accompanying plates. The most important specimen is No. 17, a red-figured alabastron by the Euergetes painter, with

which the writer compares similar vases by the same hand in Athens and the National Museum in Copenhagen. Other red-figured vases are ascribed to Beazley's Tyszkiewicz painter, and "the painter of the Bologna Boreas." Mythological scenes shown on these vases include the combat of Achilles and Memnon (No. 5), that of Ajax and Odysseus (No. 7), the apotheosis of Heracles (No. 8), Heracles and the Nemean Lion (No. 9) Heracles and Amazons (No. 10), Aeneas and Anchises (No. 13), Heracles and Halios Geron (No. 19) and Menelaus pursuing Helen (No. 20).

An Amphora in New York.—In publishing a small amphora dated at about 480 B.C., now in the Hearst collection in New York, J. D. BEAZLEY connects it with a large group of vases which have certain peculiarities in the rendering of the human figure and in other elements of the decoration and in the shapes. The anonymous artist from whose designs, if not from whose hand, they are all derived, has already been designated as the painter of the Berlin amphora, his masterpiece. His vases are almost all large—amphorae, stamnoi, craters etc., especially panathenaic amphorae—and include no cups. He is extremely sparing of decorative patterns and rarely puts more than one figure on each side of a vase, and he is especially fond of musical subjects. The Hearst amphora has on the obverse a young man playing the cithara and singing with great abandon; on the other side is his instructor listening to the rehearsal. (*J.H.S.* XLII, 1922, pp. 70-98; 4 pls.; 8 figs.)

INSCRIPTIONS

Notes on Attic Inscriptions.—In *Sitzb. Berl. Akad.* 1919, pp. 660-672, F. HILLER VON GAERTRINGEN publishes a series of observations on a number of pre-Euclidean Attic inscriptions: the decree on Salamis (*I.G.* I s. 1 a.), the Hecatompodon inscriptions (*I.G.* I, 18-19); a decree of 434-433 B.C., on public works (*I.G.* I s., p. 194, 116); and three inscriptions relating to the worship of Apollo (*I.G.* I, 79; *J. Int. Arch. Num.* XIII, 1911, p. 301 ff., *I.G.* I, 8).

A Historical Inscription from Epidaurus.—In *Sitzb. Berl. Akad.* 1922, pp. 122-147, Ulrich Wilcken presents a new interpretation of the important inscription from Epidaurus of which seven fragments are published in *I.G.* IV, 924, later augmented by three large portions of the same document discovered by Kavvadias in 1918 ('Αρχ. Έφ. 1918, p. 128 ff.). Mr. Kavvadias regards the new fragments II and I as parts of a decree by which the Achaean League altered its constitution with a view to the alliance which it concluded with Antigonos Doson in 224-3 B.C., and fragment III as a treaty of peace which the Achaeans made with the Eleans at the same time. Dr. Wilcken argues that these fragments are parts of agreements which Demetrius Poliorcetes, acting in the name of his father Antigonos Monophthalmus, made in the spring of 302 with the Hellenic League which he established at the Isthmus. The text of the fragments is given, together with a detailed commentary, and a statement of the historical inferences which the inscription justifies.

The Dedications of the Porticoes of the Agora of the Italians at Delos.—In *B.C.H.* XLV, 1921, pp. 471-486 (8 pls.; 8 figs.), J. HATZFELD continues his studies of the Italians residing at Delos (see *B.C.H.* XXXVI, 1912, pp. 1-218, and especially 204-206). The Agora of the Italians is a quadrilateral building, surrounded by porticoes on its four sides, two stories high; the lower story

consists of a colonnade, with columns and entablature of the Doric order, the upper of a colonnade with Doric columns and Ionic entablature. The inscriptions here published are on the Doric architrave and the Ionic architrave and frieze. Of the Doric architrave, enough has been found to make possible a complete restoration of the dedication on the northern end: the other sides are very poorly preserved. These inscriptions as far as preserved, save in one instance, are in Greek. Of the inscriptions on the Ionic entablature, the text is in both Greek and Latin. Here the architrave is utilized only on the northern and western sides, where the Greek text is carved, the Latin then being on the frieze. On the southern and eastern sides, the Greek text follows the Latin on the frieze. Of the northern inscription a practically complete restoration can be given; of the western, somewhat less. The southern and eastern inscriptions are not so well preserved.

Inscriptions from Amphipolis.—In *B.C.H.* XLVI, 1922, pp. 36-57, PAUL PERDRIZET comments on a number of inscriptions from the neighborhood of Amphipolis, most of which have previously been published. He visited this site in 1899 (see *B.C.H.* XXIII, 1899, p. 335). He suggests certain emendations to the texts as previously read, and shows the light that these inscriptions throw on the history of the place and the character of its people. He proves the existence of Ionicisms in the language of the inscriptions and suggests that the Ionic character of the population was due to influences coming through Thrace.

COINS

A Handbook of Greek Coins.—M. ERNEST BABELON, the distinguished Curator of the Cabinet des Médailles of the Bibliothèque Nationale in Paris, has contributed to the series of popular manuals called the Collection Payot a concise account of Greek coins. The first chapter deals with primitive methods and media of exchange, and with the invention of coinage. In the question of the origin of coined money, he attaches more importance to the formulation of monetary standards than to literary traditions attributing the invention of coins to this or that state or king. In the following chapter the archaic coins of Asiatic Greece, of European Greece, and of the Hellenic occident are successively discussed. The third chapter, on the great period of Greek coins, the fifth and fourth centuries B.C., reviews the coinage of the Persian empire and of Athens and the competition of coin standards in this period, and characterizes the monetary types of Greece and the Orient, of Italy and Sicily. A chapter on Hellenistic coinage is devoted to the coins of the kings and to the urban issues of the free cities, to the evidence of Hellenistic coins on monetary magistrates, and to the later issues of Greek coins in the west. The subject of the final chapter is Greek coinage under the Roman empire. The relation of the emperor to the Greek cities, the evidence of the coins on Roman magistracies, and the significance of coin types in the Roman period are discussed. [*Les monnaies grecques: aperçu historique.* Par E. BABELON. Paris, 1921, Payot. 160 pp.; 21 figs. 16mo. 4 fr.]

Greek Coin-Dies.—J. G. MILNE notes that the recutting of dies may have been more common than is generally thought, since it can only be detected when badly done. He exhibits a number of examples from coins in his own possession. He also makes some valuable remarks on the adjustment of dies

in striking, particularly in case of the Alexandrian mint in Roman times. *Num. Chron.* 1922, pp. 43-48; pl.)

The Oecist Coins of Tarentum.—The interpretation of the seated figure which appears on a long series of Tarentine coins has been the subject of much controversy. It has often been called the "Demos" of Tarentum. MICHEL P. VLASTO, who devotes a recent monograph to this group of coins, follows Six and Seltman in believing that a personification of an abstract idea would not appear so early in Greek art as the date of this type. In his view the figure in question is Taras, the traditional native founder of the city; while the figure on the dolphin, also a common coin-type of Tarentum, is Phalanthus, the historical founder of the Dorian colony. It is possible that after the beginning of the fourth century, when Taras and Phalanthus became confused, the young rider of the dolphin is to be identified as Taras. Mr. Vlasto holds that the types representing the oecist Taras "do not form a single and continuous issue, alternating with the fine equestrian types," but that from the first they alternate with a considerable variety of reverse types on a long series of coins which show the figure astride a dolphin on the obverse. He classifies these oecist coins as follows: (1) coins of archaic style, showing the influence of Ionian and Spartan sculpture, 485-473 B.C.; (2) coins of late archaic to early transitional style (influence of Pythagoras of Rhegium), 473-460; (3) transitional to early fine style (influence of Peloponnesian and early Attic sculpture), 460-443; (4) early fine style to period of finest art (influence of Phidias and Zeuxis), 443-400. The greater part of the monograph is a description, often accompanied by discussion, of some sixty types of the oecist coins. These are fully illustrated in the plates. [*Táras Oikιστής, A Contribution to Tarentine Numismatics.* By MICHEL P. VLASTO. (*Num. Not.* No. 15.) New York, 1922, American Numismatic Society. 234 pp.; 12 pls. 16mo.]

GENERAL AND MISCELLANEOUS

The History of the Athenian Ephebes.—Mdlle. ALICE BRENOT has published a dissertation on the history of the Athenian ephebeia as a regular and compulsory branch of military service. Prefacing her discussion with the brief description of this feature of the Athenian military system in Aristotle's *Constitution of Athens*, she proceeds to examine the evidence of literature and inscriptions on the origin of this institution. It did not exist in the fifth century: its compulsory character would have been inconsistent with the principles of Athenian polity as defined by Pericles in the Funeral Oration. The *πεπρωτοι* described by Thucydides (IV, 67, 1) were not ephebes, and Harpocration was mistaken in identifying them with the ephebes described by Aristotle. In the fourth century the emphasis placed by Plato and Xenophon on the necessity of systematic military training implies that such training did not actually exist in Athens in their time. It was only after the defeat at Chaeronea had proved the need of a trained military reserve that the ephebic system was established by legislation. Aristotle's account of the system is that of a recently instituted reform. The *Constitution of Athens*, as a sort of appendix to the *Politics* of Aristotle, thus contains an account of an institution initiated by Epicrates in legislation of 335-334 B.C. [*Recherches sur l'éphébie attique et en particulier sur la date de l'institution.* Par ALICE

BRENOT (Bibliothèque de l'École des Hautes Études, Sciences historiques et philologiques, No. 229.) Paris, 1920, Champion. xxviii, 52 pp. 8vo. 10 fr.]

Greek History between 346 and 339 B.C.—The recent important discoveries of inscriptions and papyri have enabled P. CLOCHÉ to reconstruct the history of Greece at the important period between 346 and 339 B.C. (*B.C.H.* XLIV, 1920, pp. 108-159.) He divides his article into an introduction and seven sections: I, the Greek powers, and the peace of 346; the stagnation of the year 345; II, the first conflict between Athens and Macedon, and the success of the patriotic party, 344-43, Greece and Persia in the spring of 343; III, the rupture between Athens and Macedon, and the crisis of the autumn of 343; IV, the Athenian recovery in 342; V, the reverses and isolation of Athens in 342-41; VI, the revenge of the party of Demosthenes and the war of 340-39; VII, Philip and Thebes in 340-39; conclusion.

Zeus Casius.—In *B.C.H.* XLVI, 1922, pp. 160-189, A. SALAC discusses in detail the sources of our information regarding Zeus Casius, who was a protector of navigation. After giving all the literary, archaeological, inscriptional, and numismatic evidence regarding his worship at Coreyra, Delos, Egypt, especially at Pelusium, where there was an important centre of worship, and Antioch in Syria, with additional inscriptions mentioning him found at Epidaurus and Athens, the latter of which he publishes in a form somewhat different from its previous publication, he reaches the following conclusions. The cult was of oriental origin, and our earliest references to it seem to be the Greek inscriptions from Delos which mention the name. It appears to have originated at least as far back as the third century B.C. in Syria, and centred at Mons Casius, near Antioch. At least as early as the first century B.C., it spread to Egypt, and centred at a Mons Casius near Pelusium. It was originally not anthropomorphic, but later took on the human form in different aspects in the different places where worship was carried on. A temple was consecrated to this divinity in the city of Pelusium itself during the reign of Hadrian, ca. 130 A.D., and either then or shortly afterwards absorbed the cult of Horus at that place. The cult, as seen in Greece, derives its origin, apparently, from the Egyptian form, rather than from the Syrian: and it would seem as if Delos were the centre from which it spread further. Isolated inscriptions giving the name of this deity have been found at Heddernheim in Germany, and at Palos in Spain, on a leaden anchor found under water. These two inscriptions seem to belong to the third century A.D.

The Archons of Delos between 314 and 302 B.C.—In *B.C.H.* XLIV, 1920, pp. 362-366, G. GLOTZ corrects the list of Delian archons previously published by Dürrbach (*B.C.H.* XL, 1916, pp. 288-352) by means of inscriptions, which prove that the archonship of Athenis was 309 rather than 310, and thus definitely settles the dates of the archons that follow, which had been left in some doubt by Dürrbach.

The Naopoioi of Delphi and the Creation of the College of Treasurers.—With the aid of the inscriptions found at Delphi, relating to the creation of the college of the *Tamiae* in 339 B.C., P. CLOCHÉ (*B.C.H.* XLIV, 1920, pp. 312-327) supports the theory of Bourguet that the *naopoioi* were dissatisfied with the creation of this college, at the instigation of Philip of Macedon. A table of names accompanies the article, showing the names of the *naopoioi* who remained in office at Delphi after the creation of the college; and these names

are for the most part from states that supported Philip in his policies, such as Thessaly. In the meeting of the *naupoioi* for 339, Athens and Sparta held aloof and sent no delegates. The writer shows that this throws a very interesting side light on the political history of Greece at this period, and the relations between Macedon, Delphi, and the other Greek states.

The "Agalma" of the Dionysia at Delos.—In *B.C.H.* XLVI, 1922, pp. 94–112, R. VALLOIS studies the inscriptions dealing with the cult image made each year by the Delians for the Dionysia. The text of each inscription is given at the end of the article, and comparative tables of the items of cost, etc., are also appended. The image was of wood, or horn. The cult was of phallic origin, and the image is sometimes called *ἀγάλμα*, and sometimes *φάλλος*. The earliest inscription, which is of the fourth century B.C., uses these terms interchangeably. The mention of wings, and the fact that the winged phallus is shown on vase-paintings, and on a relief found in the sanctuary of Dionysus (see *B.C.H.* XXXI, 1907, p. 504, fig. 18) enables the writer to conclude that the *ἀγάλμα* was a winged phallus. The significance of a black-figured amphora in Florence on which archaic cult images are shown, as an example of the early development of this phallic worship, is much emphasized. The image was adorned by women or young girls, and carried in procession by men. It is suggested that the procession followed the bank of the river Inopus and ended at the theatre.

The Society of the Poseidonias-tae of Berytos.—In *B.C.H.* XLIV, 1920, pp. 263–311, C. PICARD supplements the account of the society of the Poseidonias-tae of Berytos given by him in the official publication of the excavations of Delos (Fasc. VII, 1920–21) by presenting an historical study of its origins, functions, development, and final disappearance, based on information derived from the excavations of 1910 and subsequent years. This society, although having a religious nature, was primarily commercial in character, and was established at Delos in the end of the second century B.C., probably in 110–109, to promote commercial relations between Phoenicia, Greece, and Rome. The establishment, the plans of which can be restored, is the only extant example of a foreign "statio," or factory, on Greek soil. The membership was composed, according to the inscriptions, of merchants, ship-owners, and warehouse-keepers of Berytos in Phoenicia. Their function was to find and supply a market for the products of Phoenicia, and receive in return goods of other countries. The head of the Society was the *ἀρχιθιασίτης*, assisted by a priest, and this shows the religious element of the organization, as well as its commercial function. The names of five of these *ἀρχιθιασίται* are known, and are given in the article, with all inscriptional evidence extant regarding them. The name of only one priest is known. No clear indication has been found of the number of members at any one time, but a list of names of men known by inscriptions to be members is given. The principal cult was that of Poseidon of Berytos, but at a relatively early date Dea Roma was added, and Dionysus Sosipatros. Other cults were those of Astarte-Aphrodite, and possibly Zeus of Heliopolis or more probably the Tyrian Heracles. The cult statue of Poseidon was the work of Menandros Melanos, whose activity was in the end of the second century B.C. This society seems to have ceased to exist about 69 B.C.

The Boeotian Helmet.—In *The Art Bulletin*, IV, 1922, pp. 99–108 (8 figs.), A. D. FRASER discusses the type of helmet referred to as the Boeotian helmet

by Xenophon in his treatise on the art of horsemanship. Previously proposed theories as to this helmet are shown to be incorrect; Xenophon's brief description specifies a helmet which would afford the best possible mean between perfect protection and perfect freedom of view. This requirement is fulfilled by a specimen in the University Museum at Philadelphia, a helmet which corresponds closely to the type known as the helmet of Diomedes.

ITALY

ARCHITECTURE

The Villa of Domitian in the Alban Hills.—G. LUGLI completes his series of articles on the Villa of Domitian by giving a catalogue of the statuary found in its confines during the last centuries. (*B. Com. Rom.* XLVIII, 1920, pp. 3-72; 5 pls.)

The Origins of the Regia.—In *B. Com. Rom.* XLVIII, 1920, pp. 152-162 (pl.), EVA TEA discusses the literary and archaeological evidence on the origin of the regia.

Roman Monuments Drawn by Claude Lorrain and Nicholas Poussin.—In *B. Com. Rom.* XLVIII, 1920, pp. 163-165, JEAN COLIN calls attention to fifteen drawings of Roman ruins by Claude Lorrain and one by Nicholas Poussin now in the British Museum.

Terra-cotta Revetments in Etruria and Latium.—In the last half century excavations on the sites of ancient temples in Etruria and Latium have produced priceless materials for the student of art and history; but, scattered in many museums and discussed in many periodicals, they have remained almost inaccessible. Mrs. E. D. VAN BUREN has classified the terra-cotta revetments of the archaic period from these sites. The objects included in her catalogue are grouped under the heads of antefixa, acroteria, and friezes. Preceding each of the three divisions is a short introduction summing up the literary tradition and embodying the author's original observations. Special emphasis is placed on the so-called Juno Sospita type, and on the most complex motive used in the antefix, the satyr and maenad group. The use of the same moulds is noted in "widely separated places in Latium, Etruria, and Campania." Under the head of acroteria the author has included not only the ornament of the *fastigia*, but groups of high relief which serve as revetment for the *columen*, and those of which the position on the building is doubtful. Many of these figures were in part at least modelled by hand. Detailed descriptions and color notes on these are given. The strong Ionic traits of the terra-cottas of this time support the tradition that foreign artists were working in Italy during the archaic period. The introduction to the section on acroteria concludes with a brief discussion of the temple and the difficult question of how the ornament was placed. The custom of decorating buildings with friezes also came from the east, as we see from Assyrian and Hittite monuments as well as from buildings in many places in Asia Minor and the Greek islands. The lack of continuous friezes in Sicily suggests that "a series of slabs used as a frieze were brought direct to Latium and Etruria from Asia Minor, possibly by way of Crete." [*Figurative Terra-cotta Revetments in Etruria and Latium in the Sixth and Fifth Centuries B.C.* By Mrs. E. D. VAN BUREN. London, 1921, John Murray. 74 pp.; 32 pls. 4to.]

VASES

Terra Sigillata.—Under the title *An Introduction to the Study of Terra Sigillata, treated from a Chronological Standpoint* (London, 1920, Longmans, 286 pp., 85 pls., including map. 4to. \$16.50) FELIX OSWALD and T. DAVIES PRICE have published a comprehensive treatise on Roman red-glazed ware of Arretium and of the other known potteries of the Roman empire. A chapter of general descriptions not only lists the principal centres of this ceramic art, but indicates the shapes and motives of ornament characteristic of each, and names potters associated with the several sites. A chapter giving a list of the sites of which the dates can be determined is followed by a chronologically classified catalogue of well-attested potters, in which the name is accompanied by mention of the vase-shapes associated with each potter, and the provenance of vases with his stamp. A chapter entitled 'Vessels decorated in Moulded Relief' is a detailed study of a number of principal forms of terra sigillata, comprising a description of the shape of each as well as of the evolution of its ornament, and including in some cases a list of the potters who have used the shape in question. An account of the decorative designs on provincial terra sigillata of southern, central, and eastern Gaul is followed by a discussion of some details which are of special chronological significance. Another chapter is given to the description of plain forms of red glazed ware. After a description of certain miscellaneous fabrics—marbled sigillata, vessels decorated with rouletting, incised sigillata, etc.—a short concluding chapter summarizes the facts of the origin and evolution of terra sigillata. An exhaustive bibliography of the subject is appended. The plates comprise numerous line drawings—from eight to 126 on a plate—illustrating not only the principal types of figure ornament on terra sigillata, but minute variations of vase shapes and of the details of conventional ornament.

INSCRIPTIONS

Inscriptions from Bologna.—A recent monograph by GAETANO DALL' OLIO is devoted to a series of Roman tombstones found in the bed of the river Reno near Bologna, and now in the museum of the city. The cippi originally stood along the Via Emilia, which led northward from the city. A description of sixty of these monuments is followed by the author's general observations on the architectural forms of the cippi, the epigraphic and grammatical characteristics of the inscriptions, and their historical content. The comparatively large size of the stones, the style of the lettering, and the simplicity of the inscriptions shows that these monuments belong to the first century of our era. Of the seventy-four gentile names mentioned twenty-four occur on other inscriptions from Bologna. Among the persons commemorated freedmen are in the majority. Four tribes are named: one urban tribe (Palatina), three rustic (Falerna, Sabatina, Lemonia). A few of the cognomina are Greek. Trades and occupations are frequently mentioned, and a number of men are designated as *sezziri*. On some stones are numbers indicating the area of the burial lot controlled by the family concerned. [*Iscrizioni sepolcrali romane scoperte nell' alveo del Reno presso Bologna, con prefazione di Pericle Ducati. Par GAETANO DALL' OLIO. Bologna, 1922, Cappelli. viii, 166 pp.; 27 pls. Svo. 20 lire.*]

The Hypothecary Table of Veleia.—A thorough study of the hypothecary table of Veleia as an important document of the economic history of the Roman empire, was made by the late F. G. DE PACHTÈRE, who fell in the Macedonian campaign of 1916. The work has been published with a biographical notice of the author by A. Girard, and a bibliography of his published works. In the introduction the inscription is described, and the problems which it raises are stated. The following chapters deal with the geographical situation of the district, and its economic value, the situation and relation of the pagi which it included, and the history of colonization in this region, from the period of Celto-Ligurian occupation to that of Latin settlement; the development of small holdings and of large estates, and the relation of real estate to the system of imperial loans. The district of Veleia did not invite agricultural enterprise, and even at a late date a third of it was designated as *saltus*. In its place-names there are considerable traces of the Celto-Ligurian population. Under the Romans small properties were developed; but these eventually became unprofitable and were absorbed in large estates, acquired by non-resident purchasers. The difficulty of obtaining a regular return from agriculture in this region necessitated the system of rural credits inaugurated under the empire. [*La table hypothécaire de Veleia: étude sur la propriété foncière dans l'Appennin de Plaisance.* Par F. G. DE PACHTÈRE. Bibliothèque de l'École des Hautes Études, Sciences historiques et philologiques, No. 228. xix, 119 pp. 8vo.] An extended review and critique of this work by CAMILLE JULIAN is published in *R. Ét. Anc.* XXIII, 1921, pp. 287-304.

COINS

Early Roman Coinage in Sicily.—P. BONAZZI argues that certain fractions of the Roman *as*, with a wheat-ear as minor symbol on the reverse, previously ascribed to the Capuan mint, were really struck under Roman authority in Sicily at periods between the beginning of the First and the end of the Second Punic War. This he supports by evidence based on peculiarities of fabric and style differing from those in coins of Capuan mintage, on the greater frequency with which coins of this sort are found in Sicily than elsewhere, and on the frequency with which such coins are found to have been re-struck on Sicilian coins. The mint-marks KA (in ligature) and C, found on coins at the end of the last period, and commonly interpreted as indicating Capua, he would understand as designating Catania. (*R. Ital. Num.* XXXV, pp. 5-27; 2 pls.)

The Hoard of Nagytétény.—In the commune of Nagytétény, in what was in ancient times Lower Pannonia, there was discovered in 1887 a large hoard of Roman bronze coins of the fourth century A.D. Of this collection 10,585 pieces were acquired by the National Hungarian Museum, and were classified according to Cohen. ANDREA ALFÖLDI now reclassifies them in the light of the more recent work of Maurice and others on the Constantinian coinage, and gives many details of high value. (*R. Ital. Num.* XXXIV, pp. 113-190; pl.).

A Hoard of Roman Imperial Bronzes from Sardinia.—A find of imperial bronze coins was made near Talana, in Sardinia, in a region far from any known centre of ancient Roman culture. It consisted of 676 pieces ranging in date from Trojan to Gallienus, and on the whole not very well preserved. They are described in detail by A. TARAMELLI, who singles out for especial

mention among prevailingly common types good examples of the elder Philip, Herennius, Hostilianus, Aemilianus, and a *consecratio* of Mariniana. (*R. Ital. Num.* XXXIV, pp. 219-224.)

Roman Serrate and Bigate Coins in Ancient Germany.—Professor B. L. ULLMAN comments further on the oft-cited passage in Tac. *Germ.* 5, on serrate and bigate coins in Germany, providing also a good summary of current opinion. (*Philological Quarterly*, I, pp. 311-317.)

Late Roman Toga on Coins.—CARLO ALBIZZATI illustrates the form of the Roman toga of later imperial times from coins of the period, and essays to show even how it was put on. He gives an imposing array of notes, with valuable indications of literature. (*R. Ital. Num.* XXXV, pp. 69-92; 23 cuts.)

GENERAL AND MISCELLANEOUS

Municipal Fasti.—That the municipal *fasti* are direct expressions of the *municipia* which show their sympathies and preferences in the selection of the facts recorded, is the conclusion of GUIDO CALZA in an article on 'The Contents and Historical Value of certain Municipal Fasti.' (*B. Com. Rom.* XLVIII, 1920, p. 74-151.)

Vitruvius on Ancient Artillery.—In *Sitzb. Berl. Akad.* 1917, pp. 718-734, E. SCHRAMM presents the text of Vitruvius' chapters on artillery (X, 10-12) together with a translation in columns parallel to the Latin text, and numerous drawings and diagrams of the machines described by Vitruvius, and technical notes. Dr. Schramm, who is a military engineer, has tested and interpreted the text by the actual construction of the engines in question.

A Fragment of a Manuscript of Pliny's Letters.—An uncial fragment now in the Pierpont Morgan Library, containing the end of Book II and the first part of Book III of Pliny's *Letters*, has been published by E. A. LOWE and E. K. RAND. Dr. Lowe describes the fragment in detail, and discusses the criteria for the dating of uncial manuscripts. He concludes that the Morgan fragment was written in Italy about 500 A.D. The manuscript of which it was a part was later carried to France. Professor Rand, who discusses the relation of this fragment to other manuscripts of the *Letters*, concludes that it is from none other than the lost Parisinus which Aldus received from France, and used in the preparation of his edition of Pliny. He also has a chapter on the editorial methods of Aldus, showing that Aldus respected his manuscript authorities more than some modern editors have admitted. The monograph includes a complete transcription of the fragment, and facsimile plates not only of the entire fragment, but of other uncial manuscripts of early date, and of illustrative pages of Aldus' text. [*A Sixth-Century Fragment of the Letters of Pliny the Younger: a study of six leaves of an uncial manuscript preserved in the Pierpont Morgan Library, New York.* By E. A. LOWE and E. K. RAND. Washington, 1922, Carnegie Institute, Publication 304. 67 pp.; 20 pls. 4to.]

A Fragment of a Manuscript of Plautus.—A parchment leaf covered on both sides with a Latin text in purple ink has recently been bought for the Prussian Staatsbibliothek. It is said to have been used as the lining of a wooden cover of a twelfth century manuscript of Ovid. The fragment contains lines 123-147 and 158-162 of the *Cistellaria* of Plautus. H. DEGERING, who describes and discusses the fragment in detail in *Sitzb. Berl. Akad.* 1919, pp. 468-476 (pl.)

attributes it to the fourth century. From the use of purple ink he infers that it belonged to a codex *de luxe*. A transcription of the fragment is given, and a facsimile plate shows one side. In *Cl. R.* XXXVII, 1923, p. 24, E. A. LOWE presents briefly a number of reasons for doubting the antiquity of this manuscript.

Latin Manuscripts in America.—In *Philological Quarterly*, I, 1922, pp. 100-108, SEYMOUR DE RICCI publishes a list of Latin classical manuscripts in America, accompanied by brief descriptions and historical notes.

SPAIN

An Iberian Inscription.—In *Sitzb. Berl. Akad.* 1922, pp. 83-86, HUGO SCHUCHHARDT republishes an Iberian inscription which originally appeared in an article by R. Vicedo in *El Archivo de Alcoy*, 1920, pp. 217-233. The inscription is on a lead tablet which was found at the Iberian settlement of La Serrata with Iberian pottery and Hellenistic sherds of the third century B.C. It differs from many Iberian inscriptions in the coincidence of many of its letters with Greek forms. A transliteration of the text is followed by some conjectures regarding the morphology of the Iberian language.

FRANCE

Subterranean Refuges.—In many parts of France, and especially in the western central region between the Loire and the Garonne there are numerous subterranean refuges of artificial origin. A systematic study of these excavations has been made by ADRIEN BLANCHET, who has published the results of his investigations in a monograph. After outlining the question involved in the study, and the history of previous discussion of the subject he sketches the plan of his own work, and discusses certain regional groups of refuges, and the popular names which are given to them. A second chapter deals with general characteristics of these refuges: their plans; the use of pillars and vaults; their dimensions; ventilation, lighting, flooring, etc.; their provision for domestic animals, water supply, and heating; their defensive and strategic features; the method of excavation by which they were made; their furniture (stone tools, objects of metal and pottery; coins, remains of food, etc.); their relations with megalithic monuments and Roman structures. In the third chapter the successive periods of the refuges are discussed, with reference to texts ancient, mediaeval, and modern, and to the actual archaeological evidence furnished by pottery, tools, etc. The several theories of the origin of these excavations are discussed in the following chapter. They have been explained as galleries of mines and quarries, as cellars for provisions, as tombs, and as habitations and refuges. The author gives some space to a general consideration of troglodytes in ancient and modern France, and in various parts of the world. The final chapter shows the importance of the refuges in the historic study of human communities; gives data on the subterranean constructions which extend underneath certain French cities; and discusses the possibilities they offer of usefulness to the modern population. The second half of the book consists of an inventory of the subterranean refuges in France, arranged according to the administrative departments of the country. [*Les souterrains-*

refuges de la France: contribution à l'histoire de l'habitation humaine. Par ADRIEN BLANCHET. Paris, 1923, A. Picard. 342 pp.; 16 pls., containing 89 plans of refuges. Svo.]

GREAT BRITAIN

Historical Monuments of Essex.—The English Royal Commission on Historical Monuments has published a third volume of its scrupulously detailed inventory of the monuments of Essex, devoted to the northeastern part of the county. The general arrangement is the same as that of the earlier volumes: a preface calls attention to some of the most important monuments of the region, prehistoric, Roman, ecclesiastic and secular; and the same order is followed in the descriptions of the several parishes, which are accompanied by numerous half-tone plates and cuts, as well as by maps and plans of all important buildings. The Roman remains of this district are especially important, since they include the ruins of Camalodunum (Colchester). The same town is also the single example of a mediaeval walled town in the county. Many of the churches are of East Anglian type. With the exception of the thirteenth century all the mediaeval periods of church architecture are represented. Two hundred and thirty-five houses are assigned to dates before the Reformation, and there are a number of interesting examples of sixteenth century architecture. [*Royal Commission on Historical Monuments (England). An Inventory of the Historical Monuments in Essex.* Vol. III. London, 1922, H. M. Stationery Office, Imperial House, Kingsway, W. C. 2. 274 pp.; numerous, plates, figures, maps and plans. 4to. £2, 1 s.]

The Treasure of Traprain.—The hoard of Roman silver plate recently discovered at Traprain Law in East Lothian (see *Ant. J.* I, 1921, pp. 42–47; *A.J.A.* XXV, 1921, p. 313) is the subject of a sumptuously printed and illustrated monograph by ALEXANDER O. CURLE, Director of the Royal Scottish Museum at Edinburgh, in which the treasure has been deposited. This remarkable collection was found in the excavation of the slight remains of early native settlements on the west end of the hill known as Traprain Law, crammed in a hole that had been hastily made beneath one of the floor-levels. The objects were much broken and otherwise injured; many had been folded into flat packets for compactness in transportation, and their restoration to the original shapes has required expert technical skill. On the evidence of coins of Valens, Valentinian II, and Honorius found with the hoard, it is dated in the fourth century. Mr. Curle devotes a chapter to a brief description of other hoards of contemporary origin found in various parts of the Roman empire. The following chapter, comprising the greater part of the book, is a detailed inventory and description of the Traprain collection. There are ten flagons or flasks, four wine-cups, fifty bowls, twenty-two flat circular dishes, four cylindrical vessels, nine spoons, and a number of miscellaneous objects of metal. One of the flagons has reliefs representing the Fall of Man, the Adoration of the Magi, Moses striking the Rock, and the Kiss of Judas. The figures are partially gilded. Another shows Pan and a hermaphrodite; another the recognition of Odysseus by Eurycleia. On one of the bowls is represented a Nereid riding on a sea-monster with a panther's head. Another has reliefs representing various animals which are apparently to be associated with Northern Africa. One spoon has a handle shaped like a dolphin. Along

with these early Christian and late pagan works were discovered some small objects of unmistakable Teutonic origin. The fourth chapter deals with the technique of the silver vessels. To a great extent they are cast; but in many cases the casting has been supplemented by hammering and carving. Niello inlay is frequently employed. Some vessels show the use of a lathe in shaping and smoothing the surface. In a final chapter on the origin and history of the treasure the author concludes that the many analogies of conventional and representative decorative motives between the Traprain vessels and the art of the eastern Roman empire point to an eastern origin of at least part of the treasure, perhaps Alexandria, famous as a centre of the silversmith's art. But it is admitted as possible that such works were produced in Western Europe by craftsmen from the East. The treasure seems once to have belonged to a Christian community; and from the presence of small Teutonic objects it is inferred that it may have been part of the wealth of a settlement of Visigoths in Western Gaul. Presumably it was carried off in some raid on the coast of Gaul by Saxon or Celtic pirates; and was later hastily hidden at Traprain by men who never returned to claim it. [*The Treasure of Traprain, a Scottish Hoard of Roman Silver Plate*. By ALEXANDER O. CURLE. Glasgow, 1923, Maclehose, Jackson, and Co. 131 pp.; 41 pls.; 70 figs. 4to. 63 s.]

EARLY CHRISTIAN, BYZANTINE AND MEDIAEVAL ART GENERAL AND MISCELLANEOUS

Byzantine Monuments in the Region of Demetrias, Thessaly.—In *B.C.H.* XLIV, 1920, pp. 181-209 (12 figs.), N. J. GIANNOPOULOS describes a series of Byzantine monuments in the region of Demetrias, above the city of Volo, especially on the hill of Episkopi. The first is a small ikonostasis, or building to shelter an ikon, the western side of which is ornamented with a rich Byzantine relief. A series of chapels is next described, of which most are in ruins. At Episkopi itself, a church, dated by an inscription at 1639, is discussed in detail. It is built largely of pieces from more ancient buildings, of the early Byzantine style. Of these fragments, two are sufficiently alike to show that they belong together, and were parts of a relief of a double eagle. On the façade is a remarkable relief of the Virgin and Child, and an old man, perhaps Joseph, or Simeon receiving Jesus in the temple. Another important relief inside the church, in one of the chapels, shows the archangel Michael. The narthex contains mural paintings of the seventeenth century, of mediocre execution, the most interesting of which shows three bishops of Thessaly, St. Bessarion, St. Achilleus, and St. James ('Ιάκωβος?'). The ruins surrounding this church, and the fragments of which it is built show that before the Turkish conquest there was a large monastery here. Other monuments in the same region are a cistern and tower; a fountain, constructed, according to an inscription, at the expense of Parthenius, metropolitan of Larisa between 1658 and 1713; the church belonging to the ruined convent of St. Onouphrius, which is now used as a parish church in Ano-Volo; and the Church of St. George, near Episkopi, which has some interesting sculptures in its walls. *Ibid.* pp. 210-218 (2 figs.) G. MILLET discusses some of the sculptures described in the preceding article. A fragment of a sarcophagus, bearing the name of Anna



FIGURE 5.—DETAIL OF ARCH OF GALERIUS: SALONICA.

Maliasions, who is known to have died between 1274 and 1276, situated in the church of Episkopi, shows, in common with other similar works, the strong influence of Mohammedan culture. The relief of the archangel Michael is also discussed. This saint is but little portrayed in Byzantine art, three examples only being given by the writer outside of this relief: a mosaic in the church of Sant' Apollinare in Classe at Ravenna, a Byzantine manuscript in the Vatican, and a mosaic in the church at Daphni. A comparison of these with the Episkopi relief is given, and a date of the end of the eleventh century A.D. suggested.

The Arch of Galerius, and the Church of St. George at Salonica.—In *B.C.H.* XLIV, 1920, pp. 1-40 (18 figs.; 8 pls.) E. HEBRARD gives a very full report of the investigations conducted upon the arch of Galerius and the church of St. George at Salonica by the Service Archéologique de l'Armée d'Orient. These researches reveal that these two monuments are connected one with the other, and belong originally to the same period of construction,—the epoch of Diocletian, or the beginning of the fourth century A.D. In the case of the triumphal arch (Fig. 5), the excavations make possible a complete restoration or reconstruction of the base, which is 1.70 m. below the present street level, at the deepest point. In the case of the church, the excavations make possible for the first time a complete historical study of this very important building. Built by the Romans at the beginning of the fourth century A.D., it was subsequently transformed by the Byzantines into a church, in the middle of the fifth century, when some of the finest of the mosaics were placed in position. It was again rebuilt by the Byzantines at some time subsequent to the tenth century. On the Turkish conquest in the sixteenth century it was transformed into a mosque; and additions and repairs were made to it in the nineteenth. Elaborate and accurate plans accompany the article, and the construction of the original Roman building and of the first Byzantine rebuilding are given in great detail. Two of the finest of the early mosaics are published. The later constructions are less fully discussed. This building is being remodelled by the Greek Government as the archaeological museum of Salonica.

The Apocryphal Correspondence between Abgar V and Christ.—In *B.C.H.* XLIV, 1920, pp. 41-69 (2 figs.) in an article dedicated to the memory of C. Avezou, C. PICARD discusses at length an inscription found in 1914, at the south-eastern gate of Philippi in Macedonia, giving the apocryphal correspondence between Abgar V and Jesus Christ. After giving a transcription of the inscription, which is the sixth epigraphical text extant of this correspondence known to the writer, and touching on the question of the origin of this correspondence, which apparently goes back to a Syriac original, written about 280 A.D., the question of provenance is taken up. The writer argues, from the fact that the inscription was found at a gate of the city, and furthermore at the gate which in all probability was that leading to the acropolis, that this city was an important centre of Christianity in the early history of the Church.

A Greek Evangeliary.—In *Dedalo*, III, 1922, pp. 227-239 (pl.; 12 figs.), L. DAMI publishes one of the most notable examples of Byzantine goldsmith's work, the cover of an Evangeliary in the library at Siena. It came to the Hospital of the Scala at Siena from Constantinople in the middle of the fourteenth century. But its composition is a work of the thirteenth century, while

the 48 pieces of enamel of which it is composed are of still earlier dates and of various provenance. One of them is to be dated, apparently, in the tenth century, and many others in the eleventh. The codex itself is decorated with four miniatures representing the four evangelists. These belong to the eleventh century.

A Byzantine Ivory.—In *Art in America*, X, 1922, pp. 197–202 (pl.), W. M. MILLIKEN writes on the ivory figure of the Madonna with the Child in the Morgan collection of the Metropolitan Museum. The rather odd appearance of the extremely attenuated free-standing figure is explained by the indications about the piece that it once stood against a background, forming part of a plaque, and that it had a sweep of drapery at the side which has been broken away. It clearly belongs in the group formed by renditions of the same subject at Liège, Utrecht, and in the Hartmann collection; its closest parallel is the finest of these three, the example at Utrecht. It is a valuable specimen, then, of the high quality of the best of eleventh century Byzantine craftsmanship.

Europe at the End of the Middle Ages.—In *Mh. f. Kunstw.* XV, 1921, pp. 161–173 (9 figs.), H. GLÜCK discusses the map of European art in 1400 A.D. He divides Europe and the adjacent parts of Asia and Africa into five principal regions: the northwest (Gothic), the northeast (peasant art), the southwest, exclusive of Spain (Romanesque), the southeast (Byzantine), and the southern coast with Africa and Asia beyond (Mohammedan). It is along the frontiers that Renaissance movements took place: in Spain (the Mudejar style), in Bohemia, in Armenia, and, above all, in Italy, because it was a common frontier to the various regions.

ITALY

Christian Lamps.—In *N. Bull. Arch. Crist.* XXVII, 1921, pp. 70–82 (2 pls.), N. PUOTARI describes the collection of Christian lamps in the Museo Civico in Reggio Calabria. He divides them into four groups, those with anthropomorphic decoration, those with zoomorphic, those with phytomorphic, and those with symbols, signs, and various decorations. In some cases the decorations are unusual and interesting.

The Sarcophagus of St. Helena.—From a study of some drawings, particularly those by Piranesi, P. FRANCHI DE' CAVALIERI, in *N. Bull. Arch. Crist.* XXVII, 1921, pp. 15–38 (2 pls.), arrives at the conclusion that the sarcophagus of St. Helena, as we see it today in the Vatican, is not merely a restoration, it is a new work; for the work done on it in the eighteenth century completely changed its character. In its original condition it did not have, as some scholars have thought, the same style and art as the Antonine column or the Aurelian sculpture of the arch of Constantine. It was very mediocre both in composition and in execution, and if not done by the same hand that made the sarcophagus of Sta. Costanza, it certainly belonged to the same period or to a period very little earlier. Rather than having been made for a mere general, it seems likely that the sarcophagus was made for an emperor, apparently a pagan emperor; therefore, the author does not agree with Strzygowski in seeing in the relief a symbolical representation of the triumph of faith over incredulity. On the other hand, Strzygowski may be correct in assigning the origin of the sarcophagus to Egypt. But there also remains the possibility of its having been sculptured in Rome.

The Apparition of the Cross to Constantine.—In *N. Bull. Arch. Crist.* XXVII, 1921, pp. 94-100 (pl.), G. WILPERT publishes two fragments from sarcophagi which he interprets as parts of representations of the apparition of the Cross to Constantine. One fragment is in the Museo Chiaramonti, the other in the Lateran. They date from about the middle of the fourth century.

Norman-Saracenic Decoration.—In *Boll. Arte*, I, 1922, pp. 546-561 (13 figs.), P. OAST publishes some fragments of stucco from the church of Santa Maria di Terreti near Reggio Calabria. The monastery to which the church belonged is said to have been founded in 1103 by Roger II. The designs of the stucco are purely decorative and are Saracenic in style. There is no freehand work about the pieces; everything has been done with moulds or stamps. The designs resemble those of textiles, and the stuccoes were probably used in much the same way as textiles would have been used. For it seems likely that they were used as a facing for the lower parts of the walls rather than as *transenne* or altar railings. Stucco was used instead of stone not only because of the convenience of casting, but also, probably, because the stone of the region is peculiarly hard and difficult to cut.

A Thirteenth Century Church.—In *Boll. Arte*, II, 1922, pp. 3-16 (12 figs.), I. C. GAVINI writes on the church of Santa Maria at Luco, which has recently been restored, since the earthquake of 1915. Though of very early foundation, there are but fragmentary remains from periods as early as the tenth and eleventh centuries. The church to be seen today is distinctly of the thirteenth century type. It is one of the best preserved examples of the churches diffused through this region by thirteenth century Benedictines.

Pietro da Montepulciano.—In the Metropolitan Museum, New York, is a Madonna and Angels, signed by Pietro da Montepulciano, which serves U. GNOLI, in *Boll. Arte*, I, 1922, pp. 574-580 (8 figs.), as a touchstone for the attribution of other paintings. A polyptych in the museum at Recanti has been constantly spoken of as by Pietro da Recanti; but its author is clearly identical with that of the New York Madonna. Besides one or two other works that can be attributed to this master, there are a number attributable to his followers, particularly to Giacomo di Nicola da Recanti. A painting that can be assigned to neither of these, but to the school, is Professor Mather's representation of St. Anne, the Virgin, and Child. The dominant force in all is the influence of Gentile da Fabriano.

Sta. Maria degli Alemanni in Messina.—In *L'Arte*, XXV, 1922, pp. 134-141 (21 figs.), E. MAUCERI discusses the architectural and sculptural remains of the important but much damaged basilica of Sta. Maria degli Alemanni in Messina. Luigi Lombardo, who recently wrote on the same building, assigned it to the twelfth century. Mauceri thinks it belongs to the early thirteenth century, to the time of Frederic II. It is a rare example, unique in Sicily, and is a testimony to the crossing of Sicilian and northern elements in that flourishing period.

Giotto's "Navicella."—In *L'Arte*, XXV, 1922, pp. 49-69 (19 figs.), L. VENTURI brings together many copies of Giotto's masterpiece, the mosaic in St. Peter's now so completely lost through restorations, and also cites the literary references referring to it. In this way he is able to determine what vast changes have been made in the mosaic since Giotto's time and when these changes took place. The finer qualities of the work, particularly the

spatial effect, which explain why Giotto's mosaic was in his time looked upon as a great wonder, are better suggested in some representations of other subjects, obviously influenced by the *Navicella*, than in more direct copies of it. For example, the artist who worked with Giotto in the church at Assisi and painted in the chapel of the Magdalene, gets a good deal of the spirit of Giotto, we may believe, in his painting of the arrival of Lazarus at the port of Marseilles. And again in Andrea Orcagna's Calling of Peter painted in the predella of the polyptych in the Strozzi chapel of Sta. Maria Novella at Florence we get an idea of the central idea of Giotto's work, that is, the relationship of the various groups of figures.

A Florentine Mystical Subject.—In *Burl. Mag.* XLI, 1922, pp. 156–158 (pl.), T. BORENIUS publishes an unusual painting in the collection of the Earl of Crawford, Haigh Hall, Wigan. It seems probable that the painting was originally a processional banner, since it is done on canvas, an uncommon ground for a trecento altarpiece. An eighteenth century description of the piece, however, has it forming part of an altarpiece in the Duomo at Florence. The subject is unusual: the Virgin commends a group of people to Christ; he, in turn, commends them to God. The style suggests Niccolò di Pietro Gerini as author of the painting.

The Cross of San Celso.—In *Dedalo*, II, 1922, pp. 755–762 (pl.; 5 figs.), M. SALMI publishes a study of the processional cross in the sacristy of Sta. Maria presso San Celso at Milan. The cross is not enamelled, but is made of silver, hammered and gilded and set with precious stones. The cross came to the sacristy from the Abbey of Chiaravalle; but of its ultimate origin nothing is known. It has passed as a work at least as early as the tenth century. But Salmi shows that the Christ is a work of the sixteenth century, while other details are reconstructions, probably as late as the eighteenth century. The original parts Salmi assigns to Western art of the early thirteenth century.

Pacino di Bonaguida.—To the two well-established paintings of Pacino di Bonaguida, a contemporary of Giotto, R. OFFNER in *Art in America*, XI, 1922, pp. 3–27 (12 figs.), adds by analogies a number of others and outlines the characteristics of the artist's manner, which has hitherto been but vaguely understood. Though many of Pacino's pictures have gone under the designation of "School of Giotto," he is clearly not a follower of Giotto, but a member of a more conservative group, the group whose leader was the so-called Master of Sta. Cecilia.

SPAIN

An Early Spanish Retable.—In *Burl. Mag.* XLI, 1922, p. 193 (pl.), T. BORENIUS publishes a complete Spanish retable, an unusual object to be found outside of Spain. This particular one belongs to Mr. Lionel Harris. Its subject matter is the legends of Sts. Sebastian and Julian Hospitator. It came originally from Barbastro, an episcopal see in Eastern Aragon. And its closest parallels are to be found in the work of the Catalan school of the end of the quattrocento.

The Rider on the White Horse.—In *Art Bulletin*, V, 1922, pp. 1–9 (13 figs.), G. G. KING identifies the subject of a Romanesque relief in S. Giacomo, Pontida, as St. James Major as the Lord of the dead, and makes it the starting point for a general study of the rider as an iconographic type.

The Catalanian Fresco in Boston.—In *Burl. Mag.* XLI, 1922, pp. 4-11 (pl.; 4 figs.), J. PIJOAN gives an interpretation of the principal subject represented in the important fresco which has been acquired by the Museum of Fine Arts, Boston, from the church of Santa Maria de Mur. The seated Christ in the vaulted ceiling of the apse, with the four beasts of the Apocalypse, and various other details, seem to refer to apocalyptic visions. But Pijoan believes that the whole decoration really derives, partly through misunderstanding, from representations of the Ascension. The same is true of other similar decorations the subjects of which have hitherto been puzzling.

FRANCE

A Painting of the School of Avignon.—A painting showing some relationship to the Avignonesse Pietà of the Louvre is published by R. FRY in *Burl. Mag.* XLI, 1922, pp. 53-54 (2 pls.). The panel, which belongs to M. L. A. Gaboriaud, represents the Crucifixion, with the Virgin and St. John. As in the case of the Pietà and the two or three other paintings that belong in the same category, the originality of the new picture lies in the spacing of the figures, their placing in the landscape background, and in their strange, dramatic expression. There is also reproduced here the beautiful, though much damaged, fresco of the Crucifixion still *in situ* in the Chartreuse of Villeneuve-les-Avignon.

Romanesque Sculpture in Burgundy.—In answering A. Kingsley Porter's criticism of the scientific methods followed by French archaeologists (see *Gaz. B.-A.* II, 1920, pp. 73-94), P. DESCHAMPS, *ibid.* VI, 1922, pp. 61-80 (19 figs.), gives a brief *résumé* of the development of Romanesque sculpture in Burgundy, showing that it is characterized by a steady, slow progress, toward an art more accomplished, nearer to nature, more human, which reaches its full bloom in the thirteenth century. One does not find prodigious geniuses springing up here and there, without masters and without predecessors; those without predecessors are the clumsy sculptors of the eleventh century, who had previously been goldsmiths and ivory carvers and still seek their models among such arts.

Memoirs of St. Louis d'Anjou.—Among the extant liturgical ornaments having fairly convincing claims to original place among the personal appurtenances of the famous bishop Louis of Anjou, one of the most interesting is a cope in the basilica of Saint-Maximin (Var). It is beautifully embroidered with scenes from the life of Christ and the life of the Virgin in medallions. The fine harmony of colors, blue, green, and red, reminds one of the beautiful glass of Chartres, contemporary with this embroidery. The cope is described, along with less interesting things connected with the bishop Louis, by H. ALGOUT in *Gaz. B.-A.* VII, 1922, pp. 313-318 (5 figs.).

Views of Paris in Miniatures.—Of the two score miniatures of the fifteenth century showing partial views of Paris, S. REINACH chooses for special discussion in *Gaz. B.-A.* VII, 1922, pp. 257-264 (pl.; 2 figs.), the one representing St. Genevieve on Notre Dame, from a fifteenth-century Parisian Book of Hours. This gives a most interesting view of the buildings surrounding Notre Dame in the fifteenth century, more precisely, in the decade, 1430 to 1440, in which the style of the miniature dates it.

Late Fourteenth Century French Paintings.—From the paintings in Austrian collections that have been passed over by art critics B. KURTH chooses two

interesting ones for publication in *Z. Bild. K.* LVIII, 1922, pp. 14-22 (9 figs.). In the picture gallery of Heiligenkreuz, lower Austria, are two somewhat restored wings from an altar, decorated on the interior with the Annunciation and the Marriage of St. Catherine and on the exterior with the Virgin and St. Dorothea. While they show many points of similarity with painting of the school of Cologne, their decisive characteristics, the types of figures and architecture, the costumes and manner of treating folds, the colors, and the genre-like treatment of accessories, such as the angels busying themselves with various tasks, place the origin of the work in northern France, in that brilliant centre of culture at the end of the fourteenth century. It belongs to the school that produced such splendid miniatures, and itself looks much like an enlarged miniature. Much the same appreciation applies to the second panel painting here published, a Nativity in the Figdor collection at Vienna. It belongs to the same locality and date.

Sélestat.—In *Gaz. B.-A.* VI, 1922, pp. 111-127 (12 figs.), C. CHAMPION writes on the architectural remains in what was in mediaeval times a great intellectual centre, Sélestat in Alsace. During six centuries, the eleventh to the seventeenth, the city was, in effect, a vast convent. Not one order, only, but many, had their monasteries and convents there. This meant a large number of ecclesiastical buildings. Among the most interesting that remain are the church of Sainte-Foy, built in 1152-1190, and the church of St. George, built in the thirteenth century.

Mont Sainte-Odile.—In *Gaz. B.-A.* V, 1922, pp. 361-372 (8 figs.), C. CHAMPION describes what is left of the old monastery founded in the seventh century on Mont Sainte-Odile in Alsace. The earliest extant part is the Chapel of the Cross, in primitive Romanesque style, apparently of the eleventh century. Other parts of the architecture and ornamentation date from this time onward, to the nineteenth century.

Gothic Sculpture in Boston.—In *Art in America*, X, 1922, pp. 191-194 (2 pls.), R. VAN MARLE writes on six pieces of Gothic sculpture in the Boston Museum of Fine Arts. The head of an angel is attributed to the thirteenth century and compared to some of the Rheims cathedral sculpture. The limestone Madonna and Child group fits in with well known Burgundian work of the fourteenth century. A Madonna head labeled thirteenth century must belong to the fifteenth century; its type originated in Flanders. Finally, three alabaster statuettes of apostles are not "French Gothic," but German. They may be attributed to the school of the Blumenberg Master, or to that Master himself.

GERMANY

Old Franconian Master Lists.—In *Rep. f. K.* XLIII, 1922, pp. 273-323, A. GÜMBEL concludes his publications on the old Franconian master lists with documents concerning artists of all sorts in Nürnberg and Würzburg. The dates fall in the fourteenth and fifteenth centuries.

An Early Romanesque Evangelium.—In *Mh. f. Kunstw.* XV, 1922, pp. 1-15 (12 figs.), E. F. BANGE publishes a study of an interesting Evangelium manuscript in the Berlin Print Cabinet. The codex itself was written in the beginning of the eleventh century, apparently in the West, perhaps in Cologne. About 1050 it was furnished with paintings, which are clearly related to the Hildes-

heim works of the beginning of the century, the Bernward codex and the manuscripts of the Gunbalt group, and the Hezilo Evangeliary. Further history of the manuscript is unknown. It is significant for our knowledge of the atelier created by Bernward and reaching full bloom in the course of the eleventh century in Hildesheim.

NORWAY

Influences in Mediaeval Norwegian Art.—In *Gaz. B.-A.* VII, 1922, pp. 218-230 (11 figs.), H. FETT writes of the cultural relationships of Norway with France and England in the thirteenth century. The Norwegian kings of this time were comparable to the French dukes in their patronage and encouragement of art. Partly through political intercourse, there came to the Norwegian court, first English artists, and then at the end of the thirteenth century, French artists, who gave a great impetus to art and left the imprint of their style upon the painting and sculpture of Norway. In these countries, France, England, and Norway, along with Flanders, there blossomed in the Gothic period what we might call a culture of the North Seas, as we speak of a culture of the Mediterranean in antiquity.

GREAT BRITAIN

English Ivory Carvings.—The small ivory carving dug up two years ago on the site of the monastic buildings of St. Albans Abbey and published by O. M. DALTON is discussed again by H. P. MITCHELL in *Burl. Mag.* XLI, 1922, pp. 176-180 (2 pls.). Here it is shown that the ivory in question and others obviously of the same school, as well as similarly designed bronzes, are so closely related to the late eleventh century initial designs from a Latin Bible at Durham as to prove that the ivory and metal designs were copied from English manuscript initials. Indeed, it seems likely that the school of carvers in question may be located at Durham. The date assigned to the work is the first half of the twelfth century.

A Mediaeval Triptych.—In *Burl. Mag.* XLI, 1922, pp. 110-119 (2 pls.; 2 figs.), W. R. LETHABY publishes a remarkable fourteenth century English triptych now in the possession of Messrs. Durlacher and Co., London. On the interior the principal scene is the Crucifixion, with subordinate scenes from the life of Christ and the life of the Virgin; on the outside of the wings are Franciscan subjects. The painting bears unmistakable relationship to the wall paintings once in St. Stephen's Chapel at Westminster. Not only the manner of work, but the subjects also are similar, so that the new triptych helps in the interpretation of some of the damaged wall paintings. The author of the triptych must be sought among the artists of St. Stephen's Chapel, in the school of Master Hugh—or perhaps it was Master Hugh himself or his successor, William of Walsingham. The heraldic design on the triptych is apparently that of the Stuteville family.

Vestiges of Tristram in London.—In *Burl. Mag.* XLI, 1922, pp. 54-64 (2 pls.; 4 figs.), R. S. LOOMIS writes on the art objects in London which bear on the story of Tristram of Lyonesse, the romance loved above all others by mediaeval artists. The examples discussed include carved wood and ivory caskets, the Chertsey tiles, a Thuringian wall hanging, and a piece of linen quilt of Sicilian workmanship. Another piece of this Sicilian quilt is at Usella (Prato)

in the villa Guicciardini. Its unusual and interesting technique inspires a long article by L. MORELLI in *Dedalo*, II, 1922, pp. 770-783 (9 figs.), who, like Professor Rajna before him, mistakes the two pieces for a pair of quilts. The quilt and most of the other things discussed by Mr. Loomis are of fourteenth-century origin.

RENAISSANCE ART

ITALY

Symbolism in the Drawings of Jacopo Bellini.—It has been quite the fashion to find fault with Jacopo Bellini because of what critics have termed "digressions," "superfluous detail which detracts from the main subject." C. DE MANDACH, in *Gaz. B.-A.* VI, 1922, pp. 39-60 (12 figs.), by a study of Jacopo's drawings, particularly the collection in the Louvre, shows the injustice of these criticisms. The master who could give such a sincere expression of poignant grief in the Entombment was not a man to lower religious subjects to the rank of genre pictures. The explanation of the situation is that the mediaeval love of allegory was far from dead in the middle of the fifteenth century, and to such an active imagination as Jacopo's it made a great appeal. So the chained bear beside the judge in the drawing of the Flagellation is to be looked upon as a symbol of the demon; the bird, with which a child plays in the drawing of the Preaching of John the Baptist, symbolizes humility. Many similar interpretations are given here.

The Rebirth of Antiquity.—In *Rep. f. K.* XLIII, 1922, pp. 221-272 (24 figs.), F. SAXL gives a systematic presentation of the results of the studies of Warburg, adding new material here and there where necessary to round out the many partial studies into a whole. Warburg's publications, extending over more than twenty years, deal with Renaissance problems, having as their single purpose the interpretation of the type of man who gave us the Early Renaissance. Warburg shows how the Renaissance artist derived from ancient art his models for movement, not only bodily movement, but also inner movement, or the expression of pathos, and demoniacal movement. (This last derives from the representation of the ancient divinities in their magical and astrological capacities as opposed to their classical repose.) Another phase of Warburg's study deals with the union in the Early Renaissance artist of classical idealism with Western realism, and not only the union of these two antitheses, but of many others, for it is precisely the union of antitheses that determines the character of the Early Renaissance man, the apparently incompatible contrasts between Christian and heathen, between God and fortune, etc.

A Quattrocento Toilet Box.—In *Art in America*, XI, 1922, pp. 45-51 (pl.), F. J. MATHER, JR., discusses the toilet box in the Stein donation at the Louvre. This most beautiful piece of its kind that is known is dated by an inscription in 1421. The coat of arms it bears and the style of its decoration point to an Umbrian origin.

Alberti as Critic.—In *Gaz. B.-A.* V, 1922, pp. 321-331 (4 figs.), L. VENTURI discusses Alberti as an art critic, emphasizing particularly his sharp distinction between criticism and history. But though Alberti scorned Pliny for his historical treatment and himself carefully avoided anecdotal and biographical material on artists, he was at the same time so stirred by the marvelous inno-

vations of contemporary Florentines that we find in his treatise an estimation and appreciation of their accomplishments.

Tommaso Fiamberti.—In *Rass. d'Arte*, IX, 1922, pp. 73-81 (6 figs.), G. DE NICOLA describes the artistic career and characteristics of Tommaso Fiamberti, whom he identifies with "the Master of the Marble Madonnas." Fiamberti was a follower of Rossellino, but he did not lack originality. The smiling faces that he made are cheerful, sometimes almost to the point of hilarity.

New Leonardo Problems.—The Plettenberg-Esterházy cartoon for the Louvre St. Anne, which has roused so much interest since its recent publication, is subjected to the criticism of A. VENTURI in *L'Arte*, XXV, 1922, pp. 130-133 (4 figs.). He calls attention to characteristics out of harmony with Leonardo's work. Another work talked about a great deal lately is the old copy of the "Belle Ferronnière" in a private collection in New York. Venturi indicates a number of respects in which this picture is inferior to the version in the Louvre. But the same author finds worthy of Leonardo the Signa Madonna in the collection of G. B. Dibblee, at Oxford. This Madonna is quite in the style of Leonardo's early work. And its medium, sculptured stone covered with stucco, is what one might expect from the ever experimenting-master. In a drawing by Rubens that has been acquired by the British Museum Venturi recognizes a copy of another part of Leonardo's cartoon for the Battle of Anghiari.

Portraits of Ariosto.—In *Rass. d'Arte*, IX, 1922, pp. 82-98 (14 figs.), G. AGNELLI brings together many portraits of the poet Ariosto, including drawings, engravings, sculptures, and paintings. Most noted of all, of course, are the two paintings by Titian.

The Last Phase of Titian.—After stating both sides of the argument concerning the age to which Titian lived, T. BORENIUS in *Burl. Mag.* XLI, 1922, pp. 87-91 (2 pls.), calls attention to some of the less well known works of the master's old age, including a St. Sebastian in the Hermitage. He also attributes to that period of Titian's activity a painting previously unrecognized as a Titian, a Judith in the possession of Mr. A. L. Nicholson.

Some Unknown Paintings by Titian.—In *Z. Bild. K.* LVII, 1922, pp. 60-68 (8 figs.), G. GRONAU takes G. Canale's engraving of Elizabetta Querini as the starting point in his ascription of a number of portraits to Titian. This engraving, which is a copy of Titian, immediately identifies some paintings, e.g. one in the Borghese and one in the Louvre, as copies of the same original. That original is now lost or unrecognized; but the style of the copies allows us to recognize in a number of similarly conceived portraits the hand of Titian himself. Most of these are in private collections but are here reproduced. They include not only female portraits, but also one portrait of a young man.

Maiolica Designs.—In *Burl. Mag.* XLI, 1922, pp. 21-27 and 127-133 (13 figs.), B. RACKHAM, taking as a starting point a beautiful maiolica plate (from a heraldic service) by Nicola Pellipario in the South Kensington Museum, shows how that artist, more familiarly known as Nicola da Urbino, drew ideas for his designs from engravings and drawings. Very seldom did maiolica painters copy the major arts; it was naturally the smaller, less expensive things, which could be carried into their studios, that they copied.

Marcantonio.—In spite of the dearth of documentary data in regard to Marcantonio, A. CALABI in *Dedalo*, III, 1922, pp. 24-46 (12 figs.), is able to trace his career as an engraver. Taking up the art of engraving when it was

yet in its infancy, Marcantonio became a finished master of it. His progress toward that goal makes an interesting study.

A Sixteenth Century Italian Sculpture.—In *Dedalo*, III, 1922, pp. 14-24 (5 figs.), G. LORENZETTI writes a critical study of a marble group in the Schlich-tung collection of the Louvre. The group represents a youth pouring water from a large vase which is supported by two putti. Whether the youth is intended to be Apollo, Adonis, Narcissus, or merely "the genius of water" cannot be determined. It may have been designed for a fountain, but it has never been put to such use. The interesting point here discussed is its attribution. It was once given to Michelangelo, then to Sansovino. The present author attributes it to the distant disciple of Michelangelo, Girolomo Santacroce. Its closest parallel among the works assigned to this artist is the San Giovannino in the Kaiser Friedrich Museum, Berlin.

The Tortoise Fountain in Rome.—In *Z. Bild. K.* LVII, 1922, pp. 74-76 (4 figs.), W. FRIEDLAENDER-FREIBURG discusses the fountain in the Piazza Mattei in Rome. It was erected in the latter part of the sixteenth century by Giacomo della Porta. It differs widely from most of the Roman fountains with their baroque elaboration. In this respect it differs also from what was in some respects its prototype, Giovanni da Bologna's Neptune fountain in Bologna. It reminds one of Florentine work in its compactness and simplicity. And a Florentine sculptor, Taddeo Landini, was responsible for at least the figures of the youths. A document and an old-drawing and an engraving show that the tortoises which the youths push into the basin were not there originally. They must have been added when the fountain was "restored and ornamented" in 1658.

The Dome Model for St. Peter's.—In *Rep. f. K.* XLIII, 1921, pp. 92-97 (fig.), A. E. BRINCKMANN takes exception to the conclusions of N. Frey (in his recent book) concerning the dome model preserved in St. Peter's. Frey contends that it is not Michelangelo's work of 1558-61, but that it was prepared at the time of the restoration work on the dome of St. Peter's in the eighteenth century. Brinckmann believes that the basis of the work is Michelangelo's original model, that it was changed by Giacomo della Porta in the time of Sixtus V (1585-90), and was further remodelled in the eighteenth century.

Cassone Panels.—In *Burl. Mag.* XLI, 1922, pp. 18-21 (3 figs.), T. BORENIUS publishes some examples of the work of Matteo Balducci, an Umbro-Sienese artist of interest to students of cassone panels. The pieces in question are three panels belonging to Mr. W. H. Woodward. They are from a series of allegorical representations of the four seasons, representations in which the tradition of mediaeval calendar illuminations is still alive. A fine example of cassoni decorated with allegorical triumphal processions is published by the same author, *ibid.* pp. 104-109 (pl.). This pair of cassoni belongs to Mr. Walter Burns, of North Mimms Park, Herts. They picture the five triumphs, of Love, Chastity, Fame, Time, and Eternity. As the possible author of the paintings, Andrea di Giusto, while under the influence of Fra Angelico, is suggested. An illustration of a historical triumph also is cited, the Triumph of Scipio Africanus, on a cassone owned by M. Guido Arnot. Its author may be the "Anghiari Master." A panel with scenes from the life of Alexander the Great, in the British Museum, is reproduced for the first time, *ibid.*, pp. 256-259

(fig.). It is related in subject and general disposition of composition to a panel in a cassone belonging to Viscount Lascelles. But the two are not by the same artist, though they are both by Florentine artists of the mid-fifteenth century.

Tintoretto in the Ducal Palace.—In *L'Arte*, XXV, 1922, pp. 76-99 (9 figs.), M. PITTALUGA describes the paintings in the Ducal Palace at Venice that go under the name of Jacopo Tintoretto. She shows that many of the decorations are the work of pupils, only outlined by Tintoretto or not even touched by his brush. Such a criticism helps in the appreciation of Tintoretto, particularly through ridding him of the exaggerations of light and shade effects that characterize the work of his satellites.

The Prometheus Pictures Ascribed to Piero di Cosimo.—In *Sitzb. Mün. Akad.* 1920, Abh. 12, pp. 1-21, KARL BORINSKI discusses the interpretation of the picture by Piero di Cosimo in the Alte Pinakothek in Munich and the closely related Prometheus cassone in Strassburg. The elaborate mythological symbolism is in part derived from Boccaccio's *Genealogia Deorum*, in which the monkey seen in the Munich picture is connected with Epimetheus in accordance with Leontius (Leontius Pilatus of Thessalonica) and Theodontius, an unknown person whose information comes through Paulus Perusinus from Barlaam of Calabria. So Piero's mythology and allegory has passed through the thought and fancy of a monk. According to Theodontius Epimetheus was changed into a monkey. Pandora appears here as male, Pandorus, a statue made by Prometheus, into which he put the fire of life, which he had brought, with Athena's aid, from heaven. Similar symbolic Christian use of mythology is found in Calderon's drama *La Estatua de Prometeo*.

Roman Inscriptions of the Renaissance.—In *Sitzb. Mün. Akad.* 1920, Abh. 15, pp. 1-61, CHRISTIAN HÜLSEN publishes, with introductions, notes and index, the text of inscriptions of the time of the Renaissance from the collection of the Augsburg patrician Konrad Peutinger (1465-1547) and also the collection of Giovanni Capocci. The Peutinger codex 527 contains 143 Roman inscriptions, some copied by Peutinger himself, others by other hands. Apparently several small collections are bound together. Only the Roman inscriptions are published here. Those from Spain and Germany are of some importance. Peutinger's codex 526 contains no inscription later than 1491. This collection was not made by, or even for, Peutinger. In the collection of Capocci the latest inscription that can be dated is of 1494.

SPAIN

Gabriel Joly.—The little known Gabriel Joly, whose carved wooden altarscreens are to be found in considerable numbers in Spain, is described from a study of his work and from documentary evidence by S. RUBINSTEIN in *Art in America*, XI, 1922, pp. 27-40 (8 figs.). Joly was a native of France, and shows an interesting mixture of French, Flemish, and Italian influences. The Italian may be accounted for by the large number of Italian artists working in Spain at the same time with Joly, the first third of the sixteenth century.

FRANCE

A Sculptured Group of the School of Troyes.—In *Art in America*, X, 1922, pp. 239-246 (4 figs.), S. RUBINSTEIN examines the artistic relationships of the

sandstone group of the Education of the Virgin in the Morgan collection at the Metropolitan Museum. Close parallels to the figure of St. Anne are offered by details of the Solesmes Entombment, and, indeed, the Morgan group is labelled at present as belonging to the School of the Loire of the early sixteenth century. But still closer parallels are offered by examples from the region of Troyes, particularly by the figure of St. Marthe in the Church of St. Madeleine in Troyes, executed about 1515. The popularity of the subject of the Education of the Virgin among the artists of the school of Troyes suggests another reason for attributing the present group to that school.

BELGIUM AND HOLLAND

Constantyn Verhout.—In *Burl. Mag.* XLI, 1922, pp. 175-176 (2 pls.), A. BREDIUS writes briefly of the known work of Constantyn Verhout, suggesting that he, rather than the young Rembrandt, was responsible for the *Vanitas* recently published in a pamphlet by Sedelmeyer as a Rembrandt.

Hubert Gerhard.—In *Mh. f. Kunstw.* XV, 1922, pp. 81-95 (15 figs.), W. A. LUTZ writes on the activity of the sixteenth-century sculptor, Hubert Gerhard. Though Gerhard was trained in the workshop of Giovanni da Bologna, he was Dutch by birth. Much of his work was done in Augsburg and Munich, and it is this which is discussed in the present article. The most striking things done by Gerhard are the elaborate fountains, with their many figures.

Guido di Savino and Antwerp Pottery.—Early faience of the northern Netherlands, which has attracted much study recently, has generally, on account of the fact that it has the style and coloring of Italian maiolica, been considered as of Italian origin. M. LAURENT, basing his investigation on the Herckenrode pavement and upon documentary data, shows, in *Burl. Mag.* XLI, 1922, pp. 288-297 (3 pls.; fig.), that much faience of this type was made in Antwerp. Guido di Savino, who came from Castel Durante, as Piccolpasso tells us, settled in Antwerp and practised the Castel Durante style of maiolica art, and after him, his sons and his wife's second husband carried it on. Documents of Antwerp take note of the atelier, beginning with the date 1513.

GERMANY

Dürer Studies.—In *Mh. f. Kunstw.* XV, 1922, pp. 57-64, G. STUHLFAUTH dates some of Dürer's engravings and interprets certain figures in others. He also publishes a new wood engraving, by Dürer, an engraving which has more personal and historical interest than artistic value. It is now in the state library at Munich, the gift of the librarian. It was printed in an almanac of 1499 which originally belonged to Konrad Heinfogel, a Nürnberg mathematician and friend of Dürer. The subject represented is the muse Urania.

Peter Vischer.—New material on Peter Vischer is published by H. STIERLING in *Mh. f. Kunstw.* XV, 1922, pp. 23-30 (10 figs.). A drawing of 1754 at Carlsruhe by an unknown author is apparently to be trusted as a close copy of the epitaph plate of the Duchess Elizabeth made in 1522 for the Stadt-Kirche in Baden-Baden. It belongs to the large group of standing female figures which Vischer made, and it shows closest relationship with the Nürnberg Madonna and the plate of the Margravine Ottilie which is still in the church at Baden-Baden. The close resemblance of features that one sees

among these figures proves that Vischer used an ideal type for them; they are not really portraits. Another epitaph plate from the same church, which is published here, has its whole surface covered with the coat of arms of the Margrave Christoph. Another phase of the present study offers examples to prove that Flötner, in his sculpture, and Beham, in his engraving, took designs from Vischer's works. The publication of a document in regard to the Sebald monument is also of interest. It is an appeal by the church warden of Nürnberg to his fellow citizens for the remainder of the pay due Vischer for his work on the Sebald tomb. At the completion of the work the debtors were still in arrears to the extent of nearly one fourth the total cost of the monument.

Influence upon Grünewald.—In Grünewald's Mocking of Christ in Munich is the figure of one of Christ's tormentors seen from the back, which in its exaggerated movement is out of harmony with the position of Christ. Hagen has used the similarity of this figure to one in a predella picture of Pesello's in the casa Buonarrotti to prove Grünewald's sojourn in Florence. But M. VOEGELEN in *Rep. f. K. XLIII*, pp. 9-15 (12 figs.), shows that he did not need to go so far afield for his model. This figure, as well as other motives in Grünewald's picture, occurs in many northern pictures and sculptures of the Kiss of Judas and the Bearing of the Cross. It is in some prominent representation of the latter subject that the figure and other motives in question must have originated; for it is only in this subject that they find a natural place.

Grünewald Problems.—In *Rep. f. K. XLIII*, 1921, pp. 16-31 (2 figs.), W. K. ZÜLCH criticizes O. Hagen's book on Grünewald, showing how some of his principal hypotheses are incorrect, particularly the one concerning Grünewald's relationships with Italy. The influences seen in the painter's work can easily be accounted for without going to Italy, especially when one makes allowance for the large part printing played in the sixteenth century in the dissemination of ideas and designs. One of the artists whom Hagen thought it possible to identify with Grünewald, that is, Mathis Gothardt alias Nithardt, is here given a definite and independent personality by the publication of a number of documents.

History of Medicine in the Isenheim Altar.—In *Rep. f. K. XLIII*, 1921, pp. 31-43 (3 figs.), A. MARTIN studies the diseased person, who tears St. Anthony's book, in Grünewald's Isenheim altar. He concludes that it represents the devil of a sickness, some skin pestilence. The present study is carried out largely from the standpoint of medical science. It is suggested that it would be interesting to find out whether some definite plague epidemic did not play a rôle in the legend of St. Anthony, an epidemic which was wiped out by the help of the saint, and, further, whether the origin of the Isenheim altar, also, was not connected with some plague epidemic.

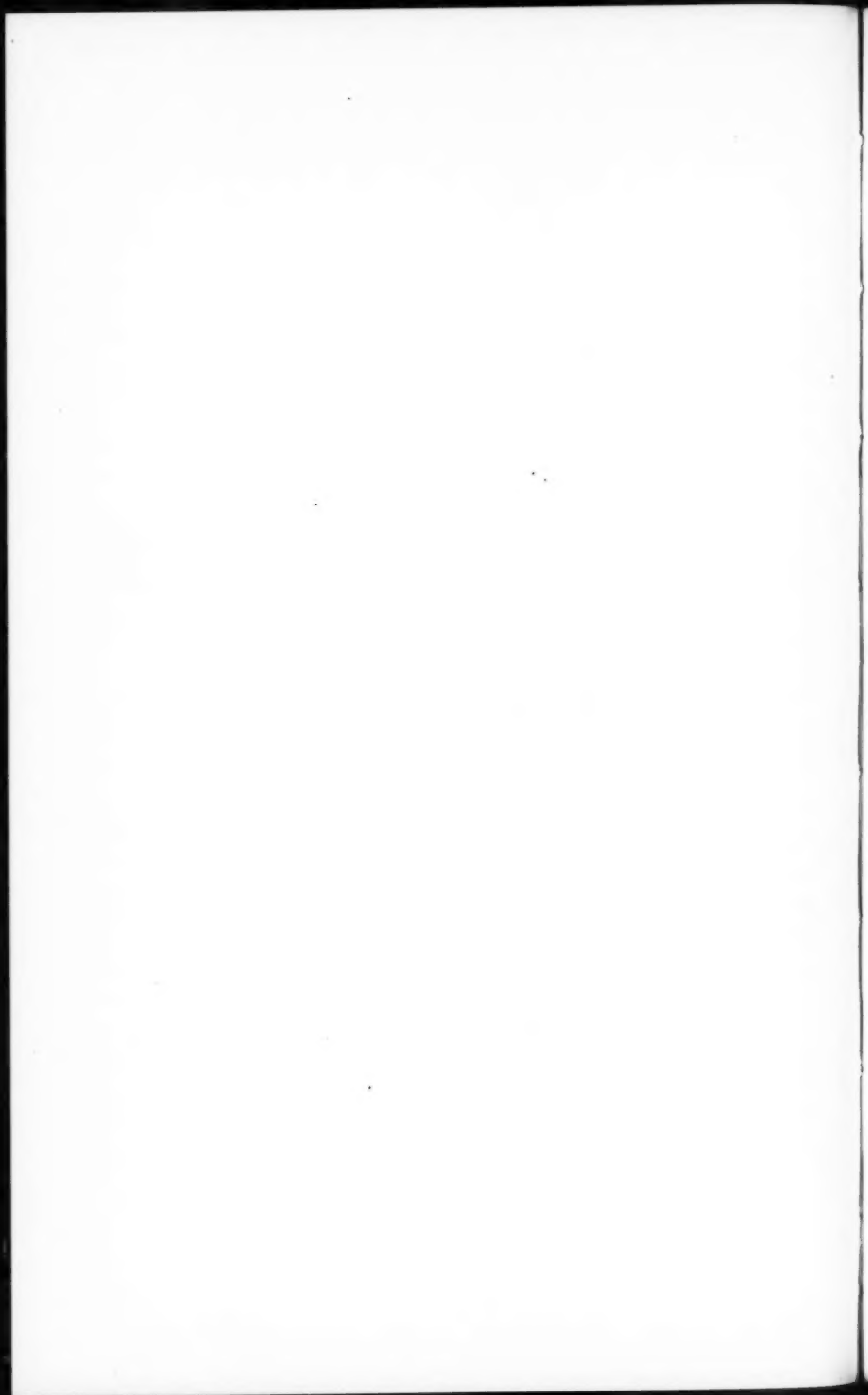
Riemenschneider.—Some of the problems concerning the work of Riemenschneider are the subject of the discussion by W. v. GROLMAN in *Mh. f. Kunstw.* XV, 1922, pp. 116-121 (7 figs.). Most attention is given to the sculptured Crucifixion in Heroldsberg. This has been mistaken by some for the work of Veit Stoss, though it is strikingly unlike his work in spirit. It has the expression of resigned sorrow and suffering typical for most late Gothic artists, and for none more than for Riemenschneider. Stoss, on the other hand, is always powerful and dramatic. The clinching proof of the present ascription is the literal repetition of the Heroldsburg Crucifix presented by that of Detwang,

one of Riemenschneider's best known Crucifixes. Since the one at Heroldsberg retains a little more of the Gothic form than the other, it must be dated earlier, that is, a little before 1500.

Cake Moulds.—A few years ago Bode objected to a theory that a certain variety of stone and clay moulds of middle Rhine workmanship that one sees in various museums served originally as cake moulds. F. BOTHE in *Rep. f. K. XLIII*, 1921, pp. 80–92 (4 figs.), answers Bode's objections. That people of the sixteenth century should have objected to having Passion scenes, etc., on their cakes does not seem reasonable, especially when such decorations would have been most appropriate at the time of religious festivals. Nor can we assume that the fine carving would not be reproduced in the cakes as long as we do not know the recipes used. Moreover, decisive proof in the matter is given by the inventory of Claus Stalburg, 1521, where 32 stone moulds are listed and described under the name of cake moulds. Hartmann Kistener made his moulds, Stalburg tells us. And two of the matrices in the Historical Museum at Frankfurt a. M. are by this artist; one of them is listed in Stalburg's inventory.

GREAT BRITAIN

Heraldry of the Wives of Henry VIII.—Exemplary of the abundance of extant memorials of Henry VIII's wives, in spite of the brevity of their periods of preference, are the instances of a single form of memorial, heraldry in painted glass, cited by F. S. EDEN in *Burl. Mag. XLI*, 1922, pp. 109–110 (pl.).



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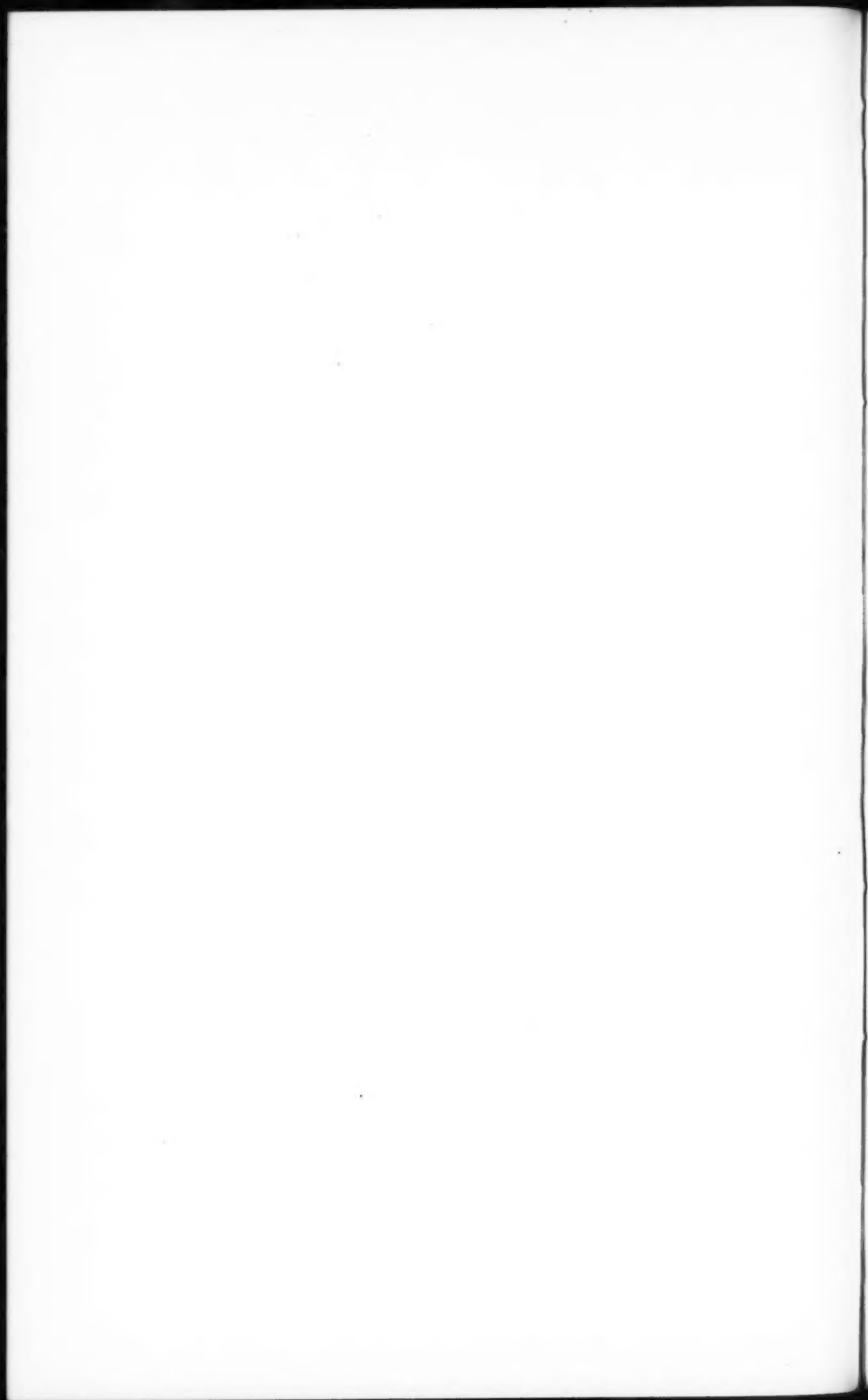
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RED-FIGURED ATHENIAN VASES RECENTLY
ACQUIRED BY THE METROPOLITAN
MUSEUM OF ART

THE study of Athenian vases has gained enormously during the last decade. The time when interest centred purely in the interpretation of the decorations has long gone by and many new investigations have added life and variety to the subject. Now that Beazley¹ has shown us that we are in no way limited to a few masters with signatures, the study of styles and attributions has become almost as active as in Renaissance paintings. Since the dating of the vases rests on firmer foundations, Langlotz² and von Lücken³ have made fruitful researches concerning the parallelism between vases and contemporary sculpture. Our appreciation of the beauty of the shapes has been greatly stimulated—be it consciously or unconsciously—by Hambidge's⁴ and Caskey's⁵ analyses. And recent studies in the making of the vases have called our attention to many technical points and brought out interesting considerations regarding their original appearance. With all these new aspects crowding in upon us, the field for study is immeasurably enlarged. And every new vase helps to increase our knowledge. The red-figured vases here discussed have been acquired by the Metropolitan Museum in recent years. They are unusually fine pieces and present many points of interest from various points of view. And in date they range from about 530 to 440 B.C., thus covering the most momentous period in Greek vase painting—when the great drama of the passage from the archaic to the fine style was enacted.

¹ Cf. *Attic Red-figured Vases in American Museums* and his articles in the *Journal of Hellenic Studies* and elsewhere.

² *Zur Zeitbestimmung der strengrotfigurigen Vasenmalerei und der gleichzeitigen Plastik*, 1920.

³ 'Archaïsche Griechische Vasenmalerei' in *Ath. Mitt.* 44, 1919, pp. 147 f.

⁴ *Dynamic Symmetry, The Greek Vase*, Yale University Press, 1920.

⁵ *The Geometry of Greek Vases*, Boston Museum of Fine Arts, 1922.

We may begin our description with a hydria-calpis, beautifully preserved¹ (Fig. 1). It has the fine flowing outline and the substantial proportions of the end of the sixth century, very different from the more graceful, but less robust contours of later times. The spacing of the decoration is nicely thought out, occupying a panel on the shoulder and a band of palmettes



FIGURE 1.—HYDRIA: METROPOLITAN MUSEUM: NEW YORK.

between the handles.² The scene, too, is well composed, two youths in fighting postures and a flute player erect between them (Fig. 2). There are inscriptions in the field, but they are meaningless.

The fighting youths must be conceived as facing each other and the flute player as on a different plane, either behind or in front. But as in all early Greek painting the picture is shown entirely in the flat,

without depth. The flute player is in the usual profile view, long ago mastered by the vase painter and so drawn with evident ease. The fighting youths are partly in profile and partly in full front or full back, a naturally impossible combination, but one regularly adopted by the vase painters as a convention before they had mastered the three-quarters view. How little they understood the first principles of perspective is shown in the drawing of the line of the vertebral column actually closer to the near than to the far side. The shoulder blades and the chest are indicated by simple curved lines, and there is little other muscular detail—all signs pointing to an early date, that is, to about 530–500 B.C. The rendering is, then, in no way naturalistic.

¹ Acc. No. 21.88.2. H. 14 $\frac{1}{2}$ in. (38 cm.).

² For similar schemes of decoration on such hydriae cf. e.g. Hoppin, *Euthymides*, p. 73, fig. 9, and Pottier, *Vases antiques du Louvre*, pl. 94.

But how successfully, in spite of this, is the action conveyed, with what swing the youths are performing their exercise, and how convincing is the flutist in his absorbed detachment.

A contest with spears and shields to music suggests the *hoplomachia*, a sport popular in Athens, in which athletes contested



FIGURE 2.—DETAIL OF HYDRIA: NEW YORK.

ἐν ἀσπιδίῳ καὶ δόρατι;¹ or, perhaps, a Pyrrhic dance performed by armed youths to the music of the flute.² The accompaniment of music to athletic exercises was of course a well-known feature in Greece which must have helped greatly the rhythm of the movements.

A crater with high handles is another fine example of the Athenian potter's art³ (Fig. 3). The division of the neck into two tiers, the pronounced curve of the body with its marked diminution toward the base, the effective ribbon handles⁴ are

¹ Cf. Gardiner, *Greek Athletic Sports and Festivals*, p. 248; Jüthner in Pauly-Wissowa, *Lexikon*, s.v. 'Hoplomachie', p. 2298; Saglio in Daremberg et Saglio, *Dictionnaire*, s.v. 'Hoplomachia', p. 248.

² Cf. Legrand, Daremberg et Saglio, *Dictionnaire*, s.v. 'Saltus', pp. 1030 f.; Emmanuel, *Essai sur l'orchestique grecque*, pp. 261 ff.; Benndorf, *Griechische und sicilische Vasenbilder*, pl. 43, 4b.

³ Acc. No. 21.88.74. Height with handles 20 $\frac{7}{8}$ in. (51.9 cm.). The vase has been broken in a number of pieces but only insignificant parts are missing.

⁴ It is noteworthy that craters of this type generally have volute handles, both in the black-figured and red-figured techniques, cf. e.g. Metropolitan Museum of Art, *Shapes of Greek Vases*, p. 9, 1, and *Vases antiques du Louvre*, pl. 127, G. 166.

beautifully thought out in relation to one another and make a good architectural whole. The decoration is confined to the upper part of the vase except for the usual band of rays at the



FIGURE 3.—CRATER: NEW YORK.

bottom; the major part of the body is left black. Besides decorative patterns—maeanders, palmettes, and ivy leaves—we have on one side a frieze of five riders (Fig. 4) and on the other five banqueters (Fig. 5). The riders are galloping to the right, wearing large-crested Attic helmets, cuirasses over their chitons, and each carrying a long lance. The reins are indicated in purple color; there are no saddles

or stirrups. It is a spirited picture of an Athenian cavalry detachment, executed about seventy years before the Parthenon frieze. The banqueters are shown comfortably reclining on their couches propped up with pillows and provided with bowls. The meal is apparently at an end; the tables with the food have been



FIGURE 4.—DETAIL OF CRATER: NEW YORK.

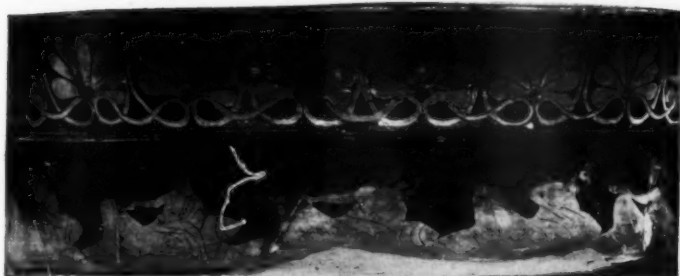


FIGURE 5.—DETAIL OF CRATER: NEW YORK.

carried out and the libation or the drinking is beginning.¹ In the meantime a lively conversation is going on among the guests. It is a mere sketch, rather hastily executed, but spontaneous and lifelike.

An amphora with a beautiful egg-shaped body² and good substantial handles has the old-fashioned double-palmette design on the neck and rays at the bottom (Fig. 6); it approximates thus the Panathenaic amphora form in shape and composition. The body is decorated with a single figure on each side—a youth carrying a lebes or caldron on his shoulder (Fig. 7) and another youth with a branch, holding up his hand in a gesture of greeting (Fig. 8). Perhaps we should connect this with a sacrificial scene on a cylix in Oxford where similar bowls filled with fruit or cakes



FIGURE 6.—AMPHORA: NEW YORK.

¹ Cf. on the procedure at dinner, e.g. Plato Com., *Laconians*, I; Menander, *Cecruphalus*, 2; Menander, *Synaristosae*, 2.

² Acc. No. 20.244. H. 17 $\frac{9}{16}$ in. (44.6 cm.). Broken in a number of pieces and put together with a few restorations. Purchased in Naples in 1837.

are being carried in both hands by youths.¹ But a simpler explanation is that the youth is the victor in a race and is carrying his prize proudly away and his companion is cheering his success. We know that bowls were regularly used as prizes.² "If one happens to be first in a race he receives a bowl, but when one is a good man and a useful citizen and is first in goodness, there is no bowl," writes Eupolis;³ and in the British Museum



FIGURE 7.—YOUTH WITH CALDRON:
AMPHORA: NEW YORK.

there is an archaic bronze lebes with an inscription stating that it was "won at the games."⁴ The branches, too, suggest a victorious athlete.

Beazley ascribes the painting to the Syλεύς painter. It certainly is in the same style as the picture of the youth and boy on our hydria No. 11.212.7 (Fig. 9) attributed by him to this same master.⁵ There are the same large, statuesque, rather heavy figures, the same long-drawn oblique lines for the folds of the mantles with a zigzag line at the bottom, similar hands, similar heads with thick necks, slightly turned-up noses, heavy chins and wide-open eyes. Consci-

entious, able work with a good feeling for quiet posing; but not very inspired. There is an attempt at a three-quarter view in the youth on the hydria; but it is not yet understood. The ribs are shown in profile, the abdominal region in full front; nor are

¹ Cf. *J.H.S.* 1912, pl. IX. This is Mr. Beazley's suggestion.

² Cf. Daremberg et Saglio, *Dictionnaire*, s.v. 'Lebes', p. 1001.

³ Athenaeus, IX, 75.

⁴ Cf. Walters, *Catalogue of Bronzes*, No. 257.

⁵ *Attic Red-figured Vases in American Museums*, pp. 66-67; Hoppin, *Handbook*, II, pp. 437 ff.

the collar bone and the line of the chest in the youth carrying the caldron drawn as they would appear in side view. The period of the vase is about 500–475 B.C. This only shows that the often quoted statement by Pliny that Cimon of Cleonae (a follower of Eumarus and, therefore, presumably active at the end of the sixth century) *catagrapha invenit hoc est obliquas imagines*,¹ even if it refers to perspective, must not be taken too literally. One cannot “discover” perspective. If Cimon was the first to try poses requiring a knowledge of foreshortening this was a great innovation at a time when the profile view was the only one attempted; but to draw such attitudes correctly naturally required long study. As a matter of fact not till more than fifty years after Cimon do we find correct three-quarter views on Greek vases.

A small, finely shaped cylix (Fig. 10) has a picture only on the inside—a wreathed komast or banqueter holding a cup in his hand surrounded by a maeander border² (Fig. 11). It is skilfully composed

to fill the round space with the figure moved a little to the left of the centre and the rest of the space broken into by the obliquely placed staff and the bread basket hanging by a nail on the wall. The rhythmical spacing and the style of the drawing point to one of the best Athenian artists of his time—the Brygos painter.³ If we compare it, for instance, with the pictures on the signed



FIGURE 8.—YOUTH WITH BRANCH:
AMPHORA: NEW YORK.

¹ N.H. XXXV, 56.

² Acc. No. 16.174.43. H. 3 $\frac{1}{8}$ in. (10 cm.). D. 9 $\frac{3}{8}$ in. (23.4 cm.). Considerably broken with a few pieces in the centre restored in plaster.

³ Beazley, *Attic Red-figured Vases in American Museums*, pp. 89–93; Hoppin, *Handbook I*, pp. 106 ff.

cylix in Würzburg¹ or the attributed cotyle in Boston² we shall note striking similarities. The posture of our komast—front view with head to the left and legs crossed—is identical with the boy in the jumping scene,³

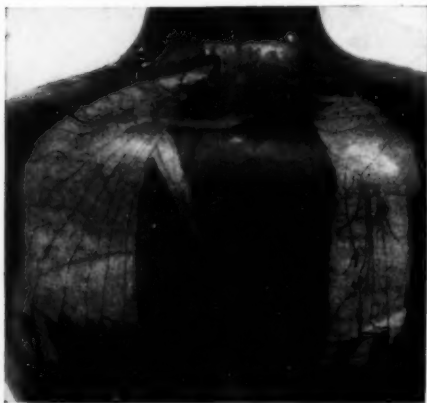


FIGURE 9.—DETAIL OF HYDRIA ATTRIBUTED TO THE SYLEUS PAINTER: NEW YORK.

while his mantle is a close parallel to those of the komasts on the Würzburg cup. It is worn in the same dandyish fashion over both shoulders and has the same long folds, black border and weights at the corners. The face, too, is characteristically Brygan with its large nose, full lips, long eye and curved, high eyebrow. Above all there is the life and verve of Brygos.

The komast is resting with his stick propped under his arm; but he conveys the feeling of high-strung life better than many a scene of intense action. The expressive face and nervous hand increase the impression of vivacity. Unfortunately several pieces from the centre of the figure are missing so that we cannot study here the artist's rendering of the body in slightly foreshortened view, which is a pity; for the Brygos painter was specially interested in this problem and sometimes solved it successfully.⁴



FIGURE 10.—CYLIX: NEW YORK.

¹ Cf. Furtwängler-Reichhold, *Griech. Vasenm.* pl. 50.

² Caskey, *A.J.A.* XIX, 1915, pp. 129 ff.

³ Cf. Caskey, *op. cit.* p. 134, fig. 4.

⁴ Cf. e.g. the komasts on the Würzburg cylix, especially the youth to the left of the top picture in Furtwängler und Reichhold, *op. cit.* pl. 50, where the twist of the body is convincingly shown in the drawing of the muscles.

A cylix with the inscription $\text{HIEPO(N)EΓ'OEZEN}^1$ incised on the handle² is apparently a hitherto unknown piece³ (Figs. 12-14). It is unfortunately much damaged, having been broken in many pieces and the surface, too, injured. But even so we can appreciate its beauty both as a piece of pottery and as a painting. The bowl

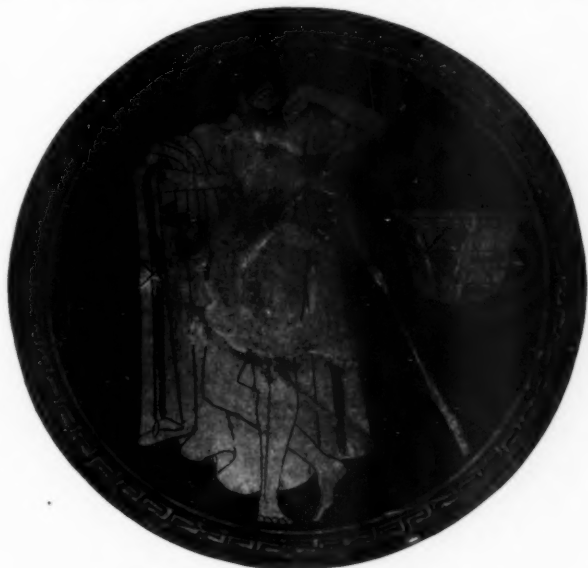


FIGURE 11.—DETAIL OF CYLIX: NEW YORK.

is over 13 inches in diameter and forms a sweeping curve with the slender foot. It was certainly a work worthy of the famous potter's own signature. The decorations are clearly by the painter Macron, for they show the marked characteristics of his style especially in the drawing of the draperies with the overfalls

¹ Acc. No. 20.246. H. 5 $\frac{1}{8}$ in. (13.8 cm.). Width with handles 16 $\frac{1}{8}$ in. (41.2 cm.).

² For the omission of the iota in $\epsilon\pi\omicron\lambda\eta\sigma\epsilon\varsigma$ compare the Berlin cylix, No. 3 in Hoppin's list, *Handbook*, II, p. 40.

³ It does not figure in the lists given by Hoppin, Beazley (*Attic Red-figured Vases in American Museums*, pp. 102 ff.), or Leonhard, *Über einige Vasen aus der Werkstatt des Hieron*, pp. 6 ff.; unless it is Hoppin, 33, 34 or 35 (Leonhard, 32-34) of which we have no descriptions. We only know of the provenance of our piece that it was procured in Naples in 1837.

and deep *kolpoi* of the chitons and the peculiar profiles with drooping under lips and heavy chins. In the interior (Fig. 12) a Satyr with a finely curved tail and long hair tied together is playing the double flutes; and to his music a Maenad, thyrsus in hand, is dancing with rhythmical steps. The motion of the



FIGURE 12.—INTERIOR OF CYLIX SIGNED BY HIERON: NEW YORK.

dance is suggested by her oblique posture which also admirably helps to fill the round space. In the field is the inscription ΠΟΔΟ(Γ)ΙΣ ΚΑΛΕ, "pretty Rhodopis," that is, "pretty rosy-faced," the name of a celebrated *hetaira* mentioned by Herodotus.¹ On the outside (Figs. 13 and 14) is a symposium scene with six couches and groups of bearded men with *hetairai*. The meal is at an end; the three-legged tables are still by the couches, but they are empty except for gay branches hanging down their sides,² the equivalent of our flower centres. A small slave boy—

¹ II, 134-135; cf. also Lucian, *Salt*. 2.

² Painted in purple, as are also most of the wreaths and fillets worn in the hair and the strings of the bread basket. (See p. 277.)



FIGURE 13.—EXTERIOR OF CYLIX SIGNED BY HERON: SIDE A: NEW YORK.



FIGURE 14.—EXTERIOR OF CTIX SIGNED BY HERON: SIDE B: NEW YORK.

painted under one handle—is serving wine from a large, wreathed crater—painted under the other handle. His task is to fill the cups of the guests with his little jug pouring the wine through his strainer. Another strainer and a ladle are hanging from a stand ready for use. The groups of men and women are beautifully varied. Sometimes the *hetaira* is on the couch with the man, and the two are drinking together or caressing each other; or she is about to mount it having first hung up her chiton on a nail on the wall; or she is entertaining her lover with playing the flute or with dancing. On the wall hang a pair of castanets and a bread basket. Altogether there is a richer assortment of lovely poses than the sometimes monotonous Macron is wont to give us. And the figures are drawn in a masterful manner, with an unhesitating brush that can draw contours of bodies, the multitudinous folds of rich garments, and locks of hair with equal ease and knowledge. It is only the hands which seem helpless and clumsy, as regularly in Macron's work. Rarely do we regret so keenly the damaged condition of the surface of a Hieron vase as we do in this splendid example.

When we compare this cylix with the numerous works of Macron we note the same harmonious grouping, lively composition and richness of detail in comparatively few other pieces; notably in the cylix with maenads in Berlin¹ and a cylix with conversation scenes in the Metropolitan Museum.² In all these ability to represent a three-quarters view is fairly developed, as we can see on our vase on several of the reclining men. One is disposed, therefore, to place this vase in Macron's late rather than early period, that is round 480 B.C.; since we may suppose that he shared in the strenuous endeavor and progress of his time and worked on an ascending scale.³

A beautiful amphora with raised ridge separating the neck from the body is decorated with only two figures—on one side a citharist (Fig. 15), on the other a listener.⁴ It is a dramatic

¹ Cf. Hoppin, *Handbook*, II, p. 40, No. 3.

² Cf. Hoppin, *Handbook*, II, p. 68, No. 18.

³ There is great difference of opinion, however, with regard to the chronology of Macron's vases, Hartwig, Leonhard and Langlotz assigning the same vases to early and late periods; cf. Langlotz, *Zur Zeitbestimmung der strenggroßfigurigen Vasenmalerei*, p. 86; Leonhard, Pauly-Wissowa, *Lexikon*, s.v. Hieron, p. 1521.

⁴ Acc. No. 20.245. H. 15 $\frac{5}{16}$ in. (39.5 cm.). Broken in a number of pieces and put together with a few missing parts restored, such as much of the middle portion of the listener and a small piece in the cover of the cithara. Purchased in Naples in 1837.

rendering of a familiar theme; the citharist in his traditional costume of long purple-bordered Ionic chiton¹ is stepping forward, his head raised in rapture over the music he is making; while his listener stands quietly by, wrapped in his mantle and holding a long stick. We are immediately reminded of the



FIGURE 15.—CITHARA PLAYER: AMPHORA:
NEW YORK.

the elaborately designed strengthening pieces, the cross bar, the strings, and the bridge. Hanging down from the sounding board is the cover ornamented with a gay maeander pattern and ending in a long fringe—a picturesque addition, especially if we imagine

citharode recently published by Beazley in *J.H.S.* 1922, p. 72, figs. 1 and 2, a wonderful rendering of exalted feeling; or of the great emotional painting of Orpheus among the Thracians on the crater in Berlin.² Our figure is quieter, more stately than either of the other two musicians; but the stir of feeling is clearly conveyed and places the scene high above the ordinary conventional representations of the subject.

As in Beazley's³ picture the cithara in our scene is carefully drawn with the different parts all clearly marked—the sounding board, the arms,

¹ Cf. on this gay costume of citharists, Stephani, *Compte Rendu*, 1875, pp. 102 ff., and Saglio, Daremberg et Saglio, *Dictionnaire*, s.v. 'Citharoedus', p. 1216.

² Buschor, *Griechische Vasenmalerei*, p. 188, fig. 132.

³ See his excellent description, *J.H.S.*, 1922, pp. 73 f., and Th. Reinach in Daremberg et Saglio, *Dictionnaire*, s.v. 'Lyra', pp. 1443 ff.

it gaily colored and swinging with the player's motions. The player will strike the cords with the plectrum in his right hand while his left wrist is put in the retaining band whereby the instrument is kept in a vertical position with both hands left free for playing. The "bunch of cords" hanging down on the right of the cithara which occur regularly on representations of citharae are not, I think, to tie the cover on as Th. Reinach thinks,¹ nor spare strings as Beazley tentatively suggests;² but part of the retaining band, the length of which could then be varied when needed.

Beazley attributes this vase to the Pan master.³ It is less affected than much of his work; less in his "mannerist" style, more in the fine dramatic style of his best piece, the Artemis and Actaeon in Boston.⁴ We may compare it also with the beautiful crater in the Metropolitan Museum showing Dionysus walking in stately fashion followed by a satyr⁵ (No. 16.72) in which the situation is likewise finely sensed and individualized. All three vases show marked similarities in the drawing of the folds (especially those of the chlamys of Actaeon and of the tunic of our citharist), in the line of the profiles (especially of Dionysus and the citharist), and in the peculiar design of the ear. The little back tilt of the corner of the himation hanging down the shoulder of the listener is a characteristic touch.



FIGURE 16.—STAMNOS: NEW YORK.

A stamnos is an excellent example of this most beautiful of Athenian vase shapes⁶ (Fig. 16). The form is no longer as mas-

¹ Cf. *op. cit.* p. 1446. They are often too short for this purpose, cf. Daremberg et Saglio, fig. 4708, and on our crater (Fig. 21).

² Cf. *loc. cit.*; they cannot be this in Daremberg et Saglio, figs. 1569 and 1570.

³ For a list of the Pan master's work cf. Beazley, *op. cit.* 113 ff. and Hoppin, *Handbook*, II, pp. 311 ff.

⁴ Cf. Furtwängler und Reichhold, *Griech. Vasenn.* pl. 115.

⁵ *Handbook of the Classical Collection*, fig. 62.

⁶ Acc. No. 17.230.37. H. 15 in. (38.1 cm.). Unfortunately it is not in very good condition. It was broken in many pieces and put together with considerable portions restored in plaster. It is said to have been found near Rome.

sive and sturdy as in the earliest red-figured period, and not yet as elongated as it became shortly afterwards,¹ but a lovely mean between the two. Around the handles are elaborate palmette and lotus-bud designs; and tongue and maeander borders help to frame effectively the principal scenes. These are taken from the well-known Danaë legend, represented not infrequently on Athenian vases,² but never with more expressive individualization than here. The



FIGURE 17.—DANAË AND THE CARPENTER:
DETAIL OF STAMNOS: NEW YORK.

two scenes evidently represent successive incidents in the same story. Acrisius, afraid of the oracle, has commanded that Danaë and her son Perseus should be exposed on the sea in a chest. On one side of the vase we see the reception of the dire news (Fig. 17). Danaë³ is seated, sceptre⁴ in hand, raising her fingers to her lips in horror-struck astonishment. Her accomplice, the

nurse, stands by her side with a casket. Her gesture is not very aristocratic but significant of her feelings. She is holding her nose with two fingers as if she had smelt a bad odor and was going to blow her nose—evidently a sign of utter disgust.⁵ And the car-

¹ Metropolitan Museum of Art, *Shapes of Greek Vases*, p. 8.

² For a list of these cf. Pauly-Wissowa, *Lexikon*, s.v. 'Danaë', p. 2086. To this should be added a hydria in the Boston Museum, No. 13.200; cf. Beazley, *op. cit.* p. 51, fig. 32.

³ Or is this Eurydice, Danaë's mother?

⁴ The head of the sceptre is missing; the picture shows it wrongly restored to join what is probably a leaf from the palmette-scroll design.

⁵ I could find no parallel to this gesture, but the following word group is eloquent enough: *μύσσομαι*—to blow the nose, *μυσάρρομαι*—to feel disgust, *μυσράπος*—foul, dirty, *μύσος*—an abomination; cf. also Sittl, *Gebärden der Griechen u. Römer*, p. 87.

penter who has to prepare the chest is walking off to the right with his hammer, holding up his hand in consternation in the same manner that any Italian or Greek would to-day. On the other side Danaë, a protective hand on little Perseus, is standing in the lion-footed chest (Fig. 18). Her father, King Acrisius, stands facing her, sceptre in hand, as if preaching at her. Unfortunately much of Acrisius is missing, including the whole lower part of his face; but Danaë's wide-eyed terror is well expressed.

The style is a little heavy but strong and vivid. More than most Greek vase painters the artist was interested in expressing psychological reactions and he has added great interest to his scenes thereby. He was evidently less occupied than many of his contemporaries with perspective, for the

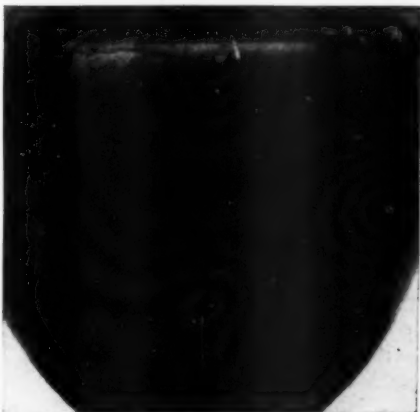


FIGURE 18.—DANAË AND ACRISIUS: DETAIL OF STAMNOS: NEW YORK.

figures are all profile or full face except the Danaë in the chest; here the drapery could answer a full-face position while the breasts are drawn in profile. Beazley attributes the scenes to the painter of the Deepdene amphora, a contemporary of Hermonax and Sotades (about 475-460 B.C.). Another work of this painter in the Metropolitan Museum is the stamnos No. 18.74.1 with Eos and Cephalus. The forms and technique of the vases themselves are also similar, and strikingly beautiful, and we may assume that the same potter produced both examples.

A beautifully preserved lecythus with a scene of Poseidon pursuing Amymone¹ (Figs. 19 and 20) between two maeander bands and a palmette design on the shoulder takes us to a different atmosphere. We have left behind us the period of archaisms

¹ Acc. No. 17.230.35. H. 17 $\frac{7}{16}$ in. (44.3 cm.). Unbroken, but the black glaze is damaged at the back. Said to have been found in Ancona.

and experiments and strenuous endeavor, and we have entered a time of easy accomplishment. The artist no longer finds it difficult to represent the human figure in action or at rest in whatever attitude he wishes to place it; the laws of perspective have become familiar and are easily applied. The eye is drawn correctly in profile view. And at the same time a new grandeur



FIGURE 19.—POSEIDON AND AMYMON: LECYTHUS: NEW YORK.

pervades Greek vase-paintings as it does the Olympia and the Parthenon pediments and every phase of contemporary art. We see this change clearly in our picture. Poseidon is a majestic god pursuing a regal maiden. The scene is full of action, but somehow the action is sublimated. Moreover the picture is no longer merely a design, for by dint of the knowledge of perspective and the ability to represent correctly the three-quarter view it has gained in spaciousness and conveys an impression of the third dimension. Thereby it has come nearer to a painting in the modern sense of the word than a Greek vase picture ever has before. But unavoidably it loses also in its carrying power as design.

And since pots are more appropriately ornamented with designs than with paintings, the decorative effect of the whole is impaired.

The story of Poseidon and Amynone does not occur on vases in archaic times, but in the period of our lecythus and later it is not uncommon.¹ Amynone is generally identified by the jug with which she has set out to get water at her father's bidding. The favorite motive is the pursuit, Amynone fleeing and Poseidon following close after her, swinging his trident. In our scene he is shown three-quarter back view, with a mantle over his left arm

¹ For bibliography cf. Pauly-Wissowa, *Lexikon*, s.v. 'Amynone', p. 2003.

and shoulder; she in a Doric chiton seen chiefly from front view, her head turned round to look at her pursuer. Her attitude and the treatment of the drapery is not unlike the "Iris" of the Parthenon, and was evidently an accepted pose of the time for rapidly moving figures. It combines in an extraordinary way the feeling of motion with a statuesque quality.

Beazley attributes this vase to the "painter of the Boston phiale,"¹ an artist distinguished for his harmonious poses and his vivid rendering of action. Another lecythus in the Metropolitan Museum, No. 09.258.23,² is a good example of his work in a quiet vein. With our swiftly moving Poseidon we may compare the companion of Odysseus on the Berlin amphora³ who is in much the same attitude, also admirably drawn. The works of this artist have in common a rather staccato treatment of the drapery, with many fine short lines to represent the folds and a curious wavy, zigzag edge. Our lecythus may be counted one of his best works.



FIGURE 20.—AMYMONE: LECYTHUS:
NEW YORK.

From the technical point of view it is interesting to observe that much of the red wash applied originally over the whole surface of the vase before the addition of the black glaze is preserved on the shoulder, and is visible at the back where the black glaze has disappeared.

A bell crater with a citharist playing to an audience on one side (Fig. 21), and three mantled figures on the other, is another

¹ In a letter to me dated April 30th, 1920. For a list of vases attributed by Beazley to this master see his *Attic Red-figured Vases in American Museums*, pp. 168 ff.

² Cf. *B. Metr. Mus.* IV, p. 104, fig. 6.

³ Cf. *Arch. Zeit.* 1876, pl. 14.

work of the fine period (about 460-420 B.C.).¹ Even more than the scene on the lecythus it makes us realize the change that has taken place. So much of the old life and vigor has departed, and in its place we have a quiet solemnity. How different the citharist of the Pan painter (Fig. 15) with his splendid energy



FIGURE 21.—BELL CRATER: NEW YORK.

from this tranquil, august player. He is standing quietly striking the strings of his instrument with his plectrum, completely absorbed in his playing, a fine statuesque figure. And he has carried his listeners with him. A bearded man is sitting on a *klismos* wrapped in his mantle, a far-away look on his face; and the youth behind him is leaning on his stick in an easy attitude, his hand raised in appreciation; another bearded man is standing very quietly behind the player. It is a beautiful rendering of response to music, finely felt and expressed. Moreover, the complete ease with which the various figures are drawn

¹ Acc. No. 21.88.73. H. 13 $\frac{1}{8}$ in. (35.4 cm.). Only slightly broken at the back, but the black glaze has suffered.

in absolutely correct perspective contrasts with the former experimental stage. And yet from the point of view of vase decoration a deterioration has clearly taken place. The former animation and decorative quality have disappeared.

Above the seated man is the inscription ΝΙΚΟΜΑΣ ΚΑΛΟΣ, "handsome Nicomas."

One of the few vase decorators of the fine period who signed his vases is Polygnotus (not of course the great painter of that name); four signed works by him are known.¹ Beazley on stylistic grounds attributes twelve more² to his hand; and our crater is clearly still another example. We may compare especially the stamnos in the British Museum³—our citharist with the Heracles; our standing bearded figure with the figure furthest to the left; the head of our seated man with the head of the centaur; and the youth leaning forward with the youth at the back with his hand against a column. Strikingly similar poses, identical features, the same rendering of hair and drapery; and with it all the same grandiose lifeless beauty. Polygnotus was clearly a man imbued with the great spirit of his time, able to reproduce in his work the idealism of contemporary sculpture (compare for instance the head of the citharist with the athlete head in the Metropolitan Museum attributed to Cresilas, *B. Metr. Mus.* 1912, p. 47); but not able to adapt this new style to serve the decoration of vases; at least not with complete success. And as his contemporaries had the same limitations, vase painting henceforth becomes more and more eclipsed by other branches of art.

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¹ Cf. Hoppin, *Handbook*, II. pp. 374 ff.

² *Op. cit.* p. 171.

³ Hoppin, *op. cit.* p. 378, No. 3.

IMAGINES IN IMPERIAL PORTRAITURE¹

A STUDY of the portrait heads of Roman emperors and the members of their immediate families reveals, in practically all instances, a remarkable uniformity in the rendering of certain minute iconographic details.

This seems the more strange in that the details in which this uniformity occurs most strikingly are exactly those which, in real life, are apt to be most variable and of least apparent consequence,—such as, for example, the arrangement of the hair.² The fixity and persistence of this feature, in itself so palpably fortuitous and ephemeral, has never been satisfactorily accounted for, and no attempt has been made to answer the question involved. Indeed, up to the present time the latter has not even been explicitly formulated.³



FIGURE 1.—YOUNG AUGUSTUS:
VATICAN MUSEUM.

That such fixity of detail does actually exist is demonstrated by an examination of certain imperial portraits discovered not

only in Italy itself but also in other and widely separated parts of the empire, each portrait appearing to be of local workmanship. Though a large number might be cited, a series for each

¹ I am indebted to Professor A. C. Johnson of Princeton for valuable criticisms and suggestions in the preparation of this paper. Its topic was suggested in my first article on the 'Imperial Portraits at Corinth,' *A.J.A.* XXV, 1921, pp. 143 ff.

² Cf. *A.J.A.* XXV, 1921, pp. 151-152.

³ Cf. Bernoulli, *Römische Ikonographie*, II, 1, pp. 57-58.

emperor who occupied the throne an appreciable length of time, I shall confine myself, for purposes of illustration, to portraits of but three emperors chosen more or less at random,—Augustus, Tiberius, and Hadrian.

Beginning with the young Augustus of the Vatican (Fig. 1),¹ perhaps the earliest known portrait of the future emperor, we note, seemingly already thoroughly established, the characteristic arrangement and division of the locks of hair across the forehead. The scheme here followed remains practically unchanged, not only in the portraits of Augustus in his prime, as, for example, in the famous statue from Prima



FIGURE 2.—PORTRAIT HEAD OF AUGUSTUS: CORINTH.



FIGURE 3.—PORTRAIT HEAD OF AUGUSTUS, FROM MEROË.

Porta,² but also in those few in which he is represented as advanced in years. The Augustus of Corinth (Fig. 2),³ of purely local workmanship and to be dated shortly before 2 A.D., shows an almost identical disposal of the locks, while in the fine bronze head of colossal scale discovered at Meroë in Egypt (Fig. 3),⁴ the typical arrangement is rendered with astonishing accuracy of detail.

In the case of Tiberius, the adherence in this respect to a definite canon is at first sight less apparent, since the scheme followed lacks the marked individuality observable in the portraits of

¹ Cf. Bernoulli, *op. cit.* II, 1, taf. II.

² Cf. Bernoulli, *op. cit.* II, 1, taf. I, left.

³ Cf. *A.J.A.* XXV, 1921, pls. V and VI.

⁴ Cf. R. Delbrück, *Bildnisse Römischer Kaiser*, taf. V; also *A.J.A.* XVI, 1912, p. 114, fig. 1.

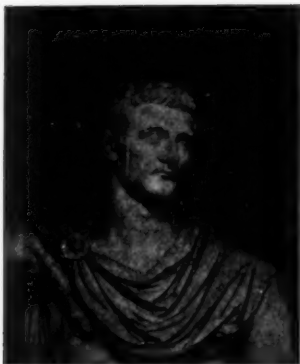


FIGURE 4.—YOUTHFUL PORTRAIT
OF TIBERIUS, FROM VEII.

striking. They are well illustrated, in spite of differences in technique and conception, by two portraits,⁴ one from Tivoli (Fig. 7), the other now in the Naples Museum (Fig. 8). With the former may be compared a bust discovered in Athens (Fig. 9),⁵ and showing close affinity to it not only in the iconography but also in the stylistic rendering of the hair itself. A somewhat different conception, due largely, no doubt, to a metal technique, is manifested in the colossal bronze head from the River Thames, at present in the British Museum (Fig. 10).⁶ Here, as one would naturally expect from the character of the work,

Augustus. Nevertheless, here also a fixed and definite order may be discerned, the essential characteristics of which are well illustrated by the youthful portrait from Veii (Fig. 4),¹ as also by the considerably older portrait discovered at Piperno (Fig. 5).² Exactly this same arrangement of strands across the forehead appears in the head at Corinth (Fig. 6),³ although here rendered with much greater luxuriance and naturalism.

Turning now to Hadrian, we find the resemblances no less



FIGURE 5.—PORTRAIT OF TI-
BERIUS, FROM PIPERNO.

¹ Cf. Amelung, *Sculpturen des Vaticanischen Museums*, Tafelband I, taf. 60, No. 400, Text I, p. 572.

² Cf. Amelung, *op. cit.* I, taf. 67, No. 495, Text I, p. 632.

³ Cf. *A.J.A.* XXV, 1921, pl. VIII.

⁴ Cf. A. Hekler, *Greek and Roman Portraits*, pl. 247 a and b.

⁵ Cf. Hekler, *op. cit.* pl. 258 a.

⁶ Cf. Walters, *Art of the Romans*, pl. LXX.



FIGURE 6.—PORTRAIT HEAD OF
TIBERIUS: CORINTH.



FIGURE 7.—PORTRAIT OF HA-
DRIAN, FROM TIVOLI.



FIGURE 8.—PORTRAIT OF HA-
DRIAN: NAPLES.



FIGURE 9.—PORTRAIT OF HA-
DRIAN: ATHENS.

is much greater formalism and schematization. But, strangely enough, an almost identical arrangement is found in two marble portraits from a far distant quarter of the empire,—one a pano-
 plied figure discovered in Crete,¹ the other a remarkably similar work from the excavations at Olympia.² The resemblances here
 apparent, not only in the hair and faces, but also in the richly
 ornamented cuirass of each figure, have been plausibly explained
 by the assumption that both came from the same Attic work-

shop.³ Nevertheless, the icono-
 graphic similarity in the arrange-
 ment of the hair in each of these
 works to that of the bronze head
 in London is, obviously, not to be
 accounted for so easily. This
 leads to the statement of my
 theory.

It seems to me quite evident
 that this fixity and persistence of
 iconographic detail, observable
 throughout the whole course of
 imperial portraiture, is to be ex-
 plained only by the supposition
 that, for the production of im-
 perial portraits outside of Rome,
 use was made of standard types
 or canons which originated in
 Rome in authoritative works, and
 were then sent out in the form of



FIGURE 10.—PORTRAIT OF HA-
 DRIAN: BRITISH MUSEUM.

clay or waxen models to be reproduced in monumental form in the
 provinces. These, I believe, were commonly known as *imagines*,
 although the word *effigies* may also have been applied to them.
 As regards the former term, which, on occasion, may signify either
 "statue"⁴ or "painting,"⁵ it is highly probable that it denoted
 originally the ancestral images of painted or colored wax, the
imagines maiorum, whole galleries of which were found in every
 house of any pretension to nobility. Further, since these an-

¹ Cf. Bernoulli, *op. cit.* II, 2, taf. XXXVIII.

² Cf. Curtius, *Olympia*, III, taf. LXV, No. 1.

³ Cf. Curtius, *op. cit.* III, p. 271.

⁴ Cf. Cicero, *Orat.* 31, and Tacitus, *Agric.* 46, 4.

⁵ Cf. Cicero, *Ad fam.* V, 12.

cestral *imagines* were almost invariably in the form of abbreviated busts, the word itself took on the limited meaning of the Greek term *προτομή*.¹

Before proceeding to an examination of the evidence in support of the theory just advanced, I must state emphatically that it of course does not exclude the probability of the existence of provincial schools of imperial portraiture, each supplying its province or general district, and each in turn dependent for its types upon the models officially exported from Rome. The existence of one such school was suggested above in connection with the very similar armored portraits of Hadrian from Olympia and Crete. Neither does it deny that complete portrait statues were occasionally sent from Rome to distant quarters of the empire, particularly to those districts where local talent proved unequal to the demands made upon it.²

To those at all familiar with Roman portraiture it is scarcely necessary to point out the *a priori* plausibility of this theory of *imagines*. The first Roman portraits were undoubtedly the *imagines maiorum* which, in the early republican days, could have been nothing more than very coarse, primitive casts from nature, differing little from the heads of the recumbent figures on Etruscan cinerary chests.³ They are entwined with the oldest customs of Roman life, and, as an attribute of patrician family pride, served almost as titles of nobility. The oldest were of wax, and derived not from the Greeks but from the Etruscans, who were clever modellers both in wax and clay.⁴ The original mould was made directly from the face of the defunct, while the waxen portrait drawn from this mould, after having served at the laying out of the dead, was carried to the forum, most often fitted upon a manikin to which was given the characteristic attitude and costume of the living.⁵ In addition, an actor, who followed near the end of the procession, wore over his face a similar mask of the defunct, whose words and gestures he parodied.⁶ After the body was

¹ Cf. *Hermes*, VI, p. 8. The word *effigies* loses its very general meaning of "representation," "statue," or "image," only in the funerals of the aristocratic *gentes* (i.e., the *funera gentilica*, cf. Pliny, *N.H.* XXXV, 6); it then means the family portraits exposed during the ceremony (cf. Valer. Max. V, 8, 3; Tacitus, *Ann.* III, 5, and IV, 9).

² Cf. Arrian, *Periplus of the Euxine Sea*, I, 3-4.

³ Cf. Hekler, *op. cit.* ill. 15.

⁴ Cf. J. Martha, *L'Art Étrusque*, pp. 298-305.

⁵ Cf. Polybius, VI, 53, 1.

⁶ E.g., as in the funeral of Vespasian, cf. Suetonius, *Vesp.* 19.

buried or burned, together with the mask which had accompanied it, another mask from the same mould was carefully preserved. This was colored,¹ mounted on a bust comprising the head, neck, and upper edges of the clothing,² and set up in the *atrium* within an especially prepared wooden frame or cupboard in the form of a small temple³ which was opened only on days of festival or for the funeral ceremonies following the death of another member of the family.⁴ The *imagines* thus accumulated were gradually blackened by the lapse of time and by the smoke from the family hearth, and became the *fumosae imagines* so often mentioned by Latin authors.⁵ These facts prove two things. First, that the Romans understood the taking of casts before the time of Lysistratus of Sicyon.⁶ Second, that the masks placed on busts in the *atrium* were mobile and could be easily carried about,⁷ and resembled, to a certain degree, those used in the theatre. This is, in fact, the aspect presented by a mask appearing in a bas-relief in Rome, in which the *imago* appears behind a dying woman and represents, by a kind of anticipation, the *imagines* which would be

¹ Cf. Polybius, VI, 53, 4.

² Cf. Quatremère de Quincy, *Le Jupiter Olympien*, pp. 36-37; also Benndorf, *Antike Gesichtshelme und Sepulcralmasken*, p. 76.

³ Cf. Pliny, *N.H.* XXXV, 6, for mention of these *armaria*; Polybius, VI, 53, 4, refers to them as *ἐὸλῳα ναῖδια*; cf. Daremberg et Saglio, *Dict. des Antig. Grec. et Rom.* fig. 3979, for their appearance.

⁴ Cf. Tacitus, *Ann.* IV, 9, 3, for mention of *imagines* in the funerals of Drusus, son of Tiberius.

⁵ Cf. Cicero, *In Pison.* I, 1; Seneca, *Epistolae*, XLIV, 5; Boethius, *De Consol. Phil.* I, 1, 16, etc. In this connection an interesting analogy is furnished by the mummies of the Roman period in Egypt, cf. the *British School of Archaeology in Egypt*,—*Roman Portraits, and Memphis IV*, by W. M. Flinders Petrie (London, 1911). On p. 2 the author, in speaking of the uniformly weathered and battered condition of the mummy cases of this period, remarks, "Thus every sign shows that the mummies, both with and without portraits, had stood exposed for a long time before burial. The conclusion we may draw is they were kept around the *atrium* of the house where children were taught their writing lessons, where the dust settled and occasional rain beat in upon the figures, and where in the cleaning of the house the footcases were gradually knocked to pieces." I am indebted to Professor G. W. Elderkin of Princeton for this interesting reference.

⁶ Who, according to Pliny, *N.H.* XXXV, 153, "was . . . the first who obtained portraits by making a plaster mould on the actual features, and introduced the practice of taking from the plaster a wax cast on which he made the final corrections." Cf. Jex-Blake and Sellers, *The Elder Pliny's Chapters on the History of Art*, pp. 176-177 and notes.

⁷ Cf. Quatremère de Quincy, *op. cit.*, *loc. cit.*

carried in the funeral.¹ Further, that the *imagines* were of relatively great permanence is proved not only by the adjective *fumosae* applied to them, but also by the discovery in certain tombs at Cumae of the actual waxen death masks which were placed over the faces of the dead and buried with them.² Of the two found at Cumae, one only is preserved,³ and is now in the museum at Naples;⁴ the eyes were imitated in glass paste, and traces of color were noted on the face.⁵

But the descriptions of ancient authors and the remains from Cumae are not our only sources of knowledge as to these ancestral portraits. There are certain plastic memorials of them, among others the statue of a toga clad man in the Palazzo Barberini (Fig. 11),⁶ who holds in each hand a waxen bust of his dead forebears. Much the same "*imago* type" of bust as that here shown appears also, though not so clearly differentiated, in the well known monuments of the Haterii,⁷ the latter showing, in addition, a translation into stone of the little wooden shrines in which the *imagines* were placed. Although reproductions in sculpture of actual waxen *imagines*, as cited above, are few in number, there exists a whole class of works, the Roman sepulchral *stelae*,⁸ which



FIGURE 11.—PORTRAIT OF UNKNOWN ROMAN HOLDING WAX BUSTS OF HIS ANCESTORS.

¹ Cf. Daremberg et Saglio, *op. cit. s.v.* 'Imago,' for this whole subject; also Bartoli, *Antichi Sepolcri*, pl. LV, and Visconti, *Museo Pio-Clement.* V, pls. XVIII and XIX.

² A custom vouched for by many authorities; cf. Tacitus, *Ann.* III, 5; Appian, *Bell. Civ.* II, 147; Dio, LVI, 34 and LXXIV, 4; Herodian, IV, 2.2.

³ Cf. Daremberg et Saglio, *op. cit.* fig. 1291, for cut.

⁴ Cf. *Mus. Borb.* XV, 54; Fiorelli, *Mon. Cumani*, pl. I; *Bullet. Napolit.* I, 107, 121, 161, 187; de Rossi, *Bull. de l'Inst. Arch.* 1853, p. 67; *Arch. Zeit.* 1867, p. 85; Benndorf, *op. cit.* pl. XIV, 6, p. 70.

⁵ Cf. Pliny, *N.H.* XXXV, 6, *ceræ pictae*; Juvenal, VIII, 2, *pictos vultus*.

⁶ Cf. Hekler, *op. cit.* pl. 127 a.

⁷ Cf. Hekler, *op. cit.* pls. 225 a, 237 a; Baumeister, *Denkmäler*, fig. 29.

⁸ Cf. Hekler, *op. cit.* pls. 133, 134; Amelung, *Sculp. des Vat. Mus.* I, taf. 24, No. 31 b-c, taf. 25, No. 80, taf. 27, No. 115 a, taf. 93 centre; Amelung-Holtzinger, *The Museums and Ruins of Ancient Rome*, I, p. 37; Altman, *Röm. Grabaltäre*, pp. 196 f.

reflects their influence most strikingly. In many cases the sculptors of these *stelae* must have worked from the *imagines* and not from the living model, since even in those works where the draperies of the female busts are obviously borrowed from the Greek,¹ the heads, with their hard, dry modelling and wooden expression betray their derivation from waxen masks.² This is also true of some few works in the round, chief among them the marble bust of a young woman, veiled, and rather less than life size, which was quite evidently destined for a tomb statue; this portrait, which comes from Asia Minor, is of an extremely realistic type, and dates probably from the early first century A.D.³ In this same category may be classed the Romano-Egyptian mummy portraits in terra-cotta.⁴

That the preparation of a clay model generally preceded the fashioning of a Roman portrait, whether in bronze or marble, is a logical inference to be drawn from our knowledge of conditions existing in other branches of sculpture not only during the period of the late republic and early empire but even in Hellenistic times.⁵ From Pliny⁶ and other contemporary authors we learn that clay modelling came early into wide use in the creation of independent works of sculpture, and that the most popular artists of the period, Arcesilaus and Pasiteles, were famous for their models. Of the former we are told, for example, that he made models in clay or plaster, *proplasmata*, which were bought by artists at a higher price than the finished works of others,⁷ and that he supplied a plaster model for a vase for which he charged a talent.⁸ Pasiteles, on the other hand, even went so far as to declare that the art

¹ Cf. Hekler, *op. cit.* pl. 134.

² Cf. Strong, *Roman Sculpture*, p. 350, "One of the finest instances, still inedited, showing five personages ranged stiffly side by side, is in the collection at Lansdowne House (cf. Michaelis, 21)."

³ Cf. Collignon, 'Deux Bustes Funéraires d'Asie Mineure,' in *R. Arch.* 1903, I, pp. 1 f, pl. II a. Several others of similar type were found at Thera, cf. Hiller von Gaertringen, *Thera*, p. 228, and Ross, *Reisen auf den Inseln*, III, p. 30.

⁴ *E.g.*, the terra-cotta masks of a man and woman in Graf's collection, dating from the first to the second century A.D., cf. Hekler, *op. cit.* figs. 18 and 19.

⁵ *E.g.*, we learn from the great inscription of Epidauros recording the contracts for the building of the temple of Aesculapius, that Timotheus contracted to make and supply models for sculpture for 900 drachmae; cf. Kavvadias, *Fouilles d'Epidaure*, I, p. 79, l. 36, also pp. 85 and 87.

⁶ Pliny, *N.H.* XXXV, 153.

⁷ Cf. Pliny, *N.H.* XXXV, 155.

⁸ Cf. Pliny, *N.H.* XXXV, 156.

of modelling in clay was the mother of all kinds of sculpture, whether in precious metals, in bronze, or in marble, and is said never to have worked free-hand, without a complete model before him.¹ If further confirmation of the wide use of models at this period be desired, it is abundantly supplied by the works of sculpture which have come down to us, works which, in themselves, show unmistakable evidence of having been translated from clay to marble through some mechanical means much like that used in modern times;² moreover, the influence of the clay technique often appears most unmistakably in the rendering of draperies, as well as in the general impressionistic character of any particular work. Models in clay and wax were, of course, always essential for sculpture in bronze.

It is also perfectly clear that the taking of moulds from finished statues or busts for the sake of "quantity reproduction" was practised long before the Roman craze³ for replicas of famous works arose. Plutarch⁴ mentions the taking of a mould from a statue of Core at Delphi as early as the time of Ptolemy Soter, *ca.* the end of the fourth century B.C., while Theophrastus, the successor of Aristotle, speaks of the use by Greek artists of plaster for the making of casts.⁵ Throughout the Roman imperial period the reproduction of works of sculpture by means of casts and plaster replicas is known to have been an ordinary occurrence.⁶ Terra-cotta, a material for which the Romans always showed a marked predilection, was also widely used both for moulds and reproductions, and without doubt exerted a considerable influence upon the development of portraiture. Tomb portraits in terra-cotta, quite obviously moulded from death masks, are by no means uncommon. An interesting example of this is offered by a life size female bust from Smyrna showing an extremely individual and realistic type of face.⁷ That it is a funerary portrait is proved by

¹ Cf. Pliny, *loc. cit.* also Gardner, *Handbook of Greek Sculpture*, ed. 1911, p. 508.

² Cf. my article on Gaius and Lucius Caesar, *A.J.A.* XXV, 1921, pp. 343-344, for a brief discussion of this point.

³ Cf. Furtwängler, *Ueber Statuenkopien*, pp. 20-21.

⁴ *De Solertia Animalium*, 36.

⁵ *De Lapid.* 67.

⁶ For this whole topic cf. Reinach, 'Le Moulage des Statues et le Sérapis de Bryaxis,' *R. Arch.* 1902, II, pp. 5-21, and the references cited.

⁷ Cf. Collignon, 'Deux Bustes Funéraires d'Asie Mineure,' *R. Arch.* 1903, I, pp. 1-11, pls. I and II b.

the veil over the head, while the pinched look of the face itself as well as the conventional and superficial treatment of the eyes demonstrates conclusively its production from a death mask.¹ It is to be dated about the time of Augustus. Two heads of marked individuality from Cervetri, now in the Louvre,² may also be cited in this connection. Terra-cotta was further employed,



FIGURE 12.—TERRA-COTTA HEAD OF UNKNOWN ROMAN: BOSTON.

because of its cheapness, facility of manipulation, and portability, for first hand artistic portraiture, as is indicated by the large number of portrait heads extant in this material,³ some of remarkably fine quality. Chief among the latter must be ranked the head of a girl broken from a bust or statue and now in the Berlin Antiquarium;⁴ it is about life size and dates from the early empire. Almost equally fine is the life-size bust of a Roman in the Boston Museum of Fine Arts (Fig. 12);⁵ it dates from the early imperial period, and looks like a thoroughly mature and artistically perfected form of the ancestral portrait.

Since marble was always dear, Romans of moderate means who admired plastic art were forced to content themselves with cheap reproductions in plaster. Thus in Roman living apartments, libraries and studies,⁶ plaster busts

¹ Benndorf, *op. cit. passim*, mentions many masks of so realistic a character that they must have been made from a retouched cast of the dead face. Such is the case for a bronze mask of the early empire in the Museum of Arolsen, which reproduces most realistically the features of an old man.

² Cf. Martha, *op. cit.* p. 333, figs. 227, 228.

³ E.g., in the Vatican, cf. Helbig, *Führer*, 2, II, p. 270; head of a young man in Munich, cf. Christ, *Führer durch das Antiquarium*, 1901, p. 19, No. 110, and Collignon, *R. Arch.* 1903, I, p. 10.

⁴ Cf. Deonna, *Statues de Terre Cuite dans l'Antiquité*, figs. 22 and 23, pp. 218 f.

⁵ Cf. Hekler, *op. cit.* pls. 144, 145; Boston Museum of Fine Arts, *Bulletin* No. 1; *Arch. Anz.* 1902, p. 130; *R. Arch.* 1903, I, p. 429.

⁶ In libraries, busts or other portraits of authors were placed above the collections of their works, cf. Cicero, *Ad. Att.* IV, 9. *Scripta* and *imagines* are often associated, cf. Seneca, *De tranquill. animi*, 9, 7.

were frequent; of plaster also were the Chrysippi, the Democriti, and the unkempt Zenones which one saw in the times of Martial and Juvenal in the houses of the false stoics and the rest of the charlatan philosophers.¹ That popular authors were also thus honored is proved not only by the literary references, but also by a life-size bust found at Cologne in the substructions of a Roman house, the bust being a replica of the so-called portrait of Seneca.² We know further that, in the time of the empire, portraits of the emperors were generally placed in private dwellings; and not only in the mansions of the wealthy, but in the counting-houses of the money changers, in the shops and work-rooms, in all the stalls, vestibules, and windows their images were displayed,³ for the most part badly painted and coarsely moulded in wax or plaster, obviously turned out in huge quantities "for the trade."⁴

It is quite plain, I think, that all the evidence so far adduced, whether literary or archaeological, converges to a single point and indicates unmistakably that, when it finally became desirable from a political point of view that the features of the reigning prince and members of the imperial family should be made familiar to a vast and widespread population, the means of accomplishing this end were ready at hand, material and technique both highly developed.

But my theory as to the mode of distribution of imperial portrait types throughout the empire rests by no means upon a mere inference drawn from minute iconographic resemblances in certain series of portraits; neither is it dependent merely upon the known existence of a method and technique applicable to such distribution. It is vouched for by literary evidence as well.

From the middle of the third century certainly, and most probably from the very beginning of the empire, the custom prevailed of officially sending forth, upon the accession of each new emperor, his portraits crowned with laurel to the provincial cities.⁵

¹ Juvenal, II, 4-5; Martial, IX, 47.

² Cf. *Bonn. Jb.* 1888, fasc. 85, pp. 55-73, pl. III; Blanchet, *Étude sur les figures de terre cuite de la Gaule Romaine*, 1901, p. 43 of supplement.

³ Cf. Fronto, ed. Naber, Leipzig 1867, p. 74.

⁴ Cf. Friedländer, *Sittengeschichte Roms*, III, p. 248.

⁵ Cf. Friedländer, *op. cit.* III, pp. 241 f. These portraits, though generally in plastic form, may in some instances have been paintings; in the late empire, and upon the decline of sculpture, the latter was perhaps the rule.

The portrait sent out was, therefore, known as the *laureata imago*,¹ although use was also made of the shorter forms *lauratum* and *labratum*.² Each likeness was borne by white clad, richly dressed officials, the *σεβαστοφόροι*,³ was attended by a column of soldiers as a guard of honor, and preceded by flute players and trumpeters;⁴ at its approach the people flocked forth with lights and incense to receive it, and celebrated its arrival as a popular festival.⁵ In like manner at the circensian games in Byzantium these portraits were borne into the circus by white-clad men with lights and torches.⁶ Granting that all the accounts of this custom which have come down to us are of comparatively late date, I believe, nevertheless, that certain inferences may be drawn, not only from these late authorities but also from writers of the early empire, which show conclusively that the custom was coëval with the empire itself, and existed from the period of Caesar and Augustus onward. For example, references to it at the time of Constantine and earlier indicate that it had been long established;⁷ we know further that, from the very beginning, the *imago principis* played an important part in many public ceremonies. Indeed, as concerns the games, Caesar in his own lifetime had already obtained *tensam et ferculum circensi pompa*,⁸ indicating that his *imago* was carried about with the images of the gods, and we may assume the same for Augustus.⁹ Provincial governors undertook to have the imperial portrait set up in all public buildings, particularly in the *pretorium*, where it received official adoration;¹⁰ it was also carried

¹ Cf. Lactantius, *De Mortibus Persecutorum*, c. 25.

² Cf. Du Cange, *Glossarium Mediae et Infimae Latinitatis*, s.v.; also Gothofred. ad Cod. Theodos. VIII, 11, 5, vol. II, p. 635; Ritt. P. E. Müller, *De genio, moribus, et luxu aevi Theodosiani*, Havniae 1797, II, p. 50 f.

³ Cf. Becker-Marquardt, *Handbuch der Römischen Alterthümer*, II, 1, 3, p. 272, note 1183. The title *σεβαστοφάντης* found in the Orient, although usually explained as 'Flamen Augustalis,' may well have some connection with the bearer of the *imago*; cf. Cagnat et Lafaye, *Inscr. Gr. ad Res Romanas Pertinentes*, Index III, 2., *Res Sacra*, s.v. *σεβαστοφάντης*.

⁴ Cf. Chrysostomus, *Serm. 60 in Paulum Apost.*

⁵ Cf. *Ex Septima Synodo*, act. 1, p. 483, Mommsen, *Staatsrecht*, I, 3, X.

⁶ Cf. Du Cange, *op. cit.* s.v. 'lauratum.' Cf. also Codex Theodosianus, XV, 4, 1, *de imaginibus imperialibus*.

⁷ Cf. Lactantius, *loc. cit.* but more particularly Zosimus, II, 9, . . . *ὅτι δὲ τῇ Πρώτῃ τῆς εὐκρίτου ἀβροῦ δειχθείσης κατὰ τὸ σὺνθητες*.

⁸ Cf. Suetonius, *Caesar*, 76.

⁹ Cf. Dio, LVI, 34, in which is an account of the *imagines* of Augustus, both of wax and gold, which were displayed at his funeral.

¹⁰ Cf. Pliny, *Epistolae*, X, 96, 5.

out with the legions upon military expeditions and set up in all the camps.¹ It is thus quite logical to conclude that the official custom of sending forth *imagines* obtained in the early empire as well as in the late.

Further evidence, indirect, but of prime importance, is to be drawn from the mention of portraits of the so-called military emperors, the majority of whom ruled for but a few months each. For example,—that portraits of Galba, who first left Spain after the arrival of the news of Nero's death, June 8th, 68, and thence marched slowly into Italy, were found "in all the municipalities"² at the time of his own death little more than seven months later,³ is even less surprising than that, before the battle of Cremona, toward the end of 69 A.D., portraits of Vitellius in the camp of the fleet at Ravenna could have been thrown down, since he himself had not appeared in northern Italy until the end of May.⁴ But earlier, during his march from Cologne by way of Lyons toward Italy, even before he had reached Vienne, in divers places equestrian statues had been erected to him, the fall of which passed for an evil omen.⁵

Again, the determination to erect a statue of Faustina the Younger, the base of which is still extant at Olympia, can first have been reached only after her father, Antoninus Pius, through his adoption by Hadrian, had become heir to the throne and coregent, *i.e.*, after February 25th, 138; the wording of the inscription on the basis shows, however, that it must have been cut, and the portrait erected, before the arrival in Greece of the news of Hadrian's death, which occurred on July 10th of the same year.⁶ The portrait was thus made and set up in the space of less than five months.

The rule of the two Gordiani endured, apparently, but thirty-six days at the most, yet shortly after the elder Gordian was proclaimed emperor, the cities of Africa had already been decorated with his statues and pictures.⁷ The reign of Pupienus and

¹ Cf. Tacitus, *Ann.* XII, 17, and Lipsius, *Excursus F ad Ann.* III, 36.

² Cf. Tacitus, *Hist.* III, 7.

³ January 15th, 69.

⁴ Cf. Tacitus, *Hist.* III, 12 f.

⁵ Cf. Suetonius, *Vitell.* c. 9.

⁶ Cf. Dittenberger, 'Inscr. aus Olympia,' *Arch. Zeit.* XXXV, 1877, p. 36, note 1; also *op. cit.* 1876, p. 50, 8.

⁷ Cf. Herodian, VII, 5, 8.

Balbinus lasted for three months, April to July, 238.¹ When Maximinus was killed before Aquileia at the beginning of May, his statues and portraits were forthwith overthrown, and his troops still in the city were compelled to worship those of the two emperors, Pupienus and Balbinus, appointed by the Senate;² further, the consul Claudius Julianus, in a proclamation published to the two emperors probably soon after their nomination, congratulates the legions and auxiliaries, "who already throughout the whole kingdom worship your portraits."³

From the foregoing notices it is sufficiently clear that one of the first cares of each new administration was to see that the imperial portrait should be set up in all cities and camps with the greatest possible speed. That this might be accomplished the more rapidly, sculptors and painters must have been held in readiness in all the centres of Italy and the provinces; they may even have been regularly attached to the official retinue of governors, generals, and other high officials. This is indicated not only by the amazing speed with which the portraits were set up, but also by the fact that statues and portraits of the reigning emperors were not merely found, but are known to have existed in large numbers, in every part of the empire.⁴

The conclusion, in view of what has already been said, is obvious. To permit of this rapid and simultaneous erection of portraits in widely separated regions, each local sculptor or painter must have had before him an official likeness, which he proceeded to re-create and interpret in accordance with his own particular gifts or training, adhering carefully, however, to the iconographic canon as established. Further, this official model sent forth from Rome, in order to fulfil the purpose of its existence, must have possessed certain very definite qualities, among the most important of which are to be reckoned lack of weight and bulk, ease and cheapness of manufacture, and accuracy, combined with a relative degree of permanence. All these requirements are met most satisfactorily by models in the form of clay or waxen *imag-*

¹ Cf. Friedländer, *op. cit.* I, p. xxvi.

² Cf. *Vita Maximin.* II, 23 f.

³ Cf. Maxim. et Balbin. c. 17. Most of the foregoing historical data were drawn from Friedländer, *op. cit.* III, pp. 241 f., and from Becker-Marquardt, *op. cit.* II, 1, 3, p. 272, note 1183.

⁴ Cf. Friedländer, *op. cit.* III, pp. 247-250.

ines. In the latter, then, which seem to have been turned out in large numbers from terra-cotta moulds taken from original, authentic portraits made at Rome, lies the true explanation of the remarkable iconographic uniformity observable in any series of imperial portraits.

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VENUS POMPEIANA AND THE NEW POMPEIAN
FRESCOES

ONE of the most interesting discoveries in the recent excavations at Pompeii is a series of frescoes dealing with religious subjects. In addition to conventional representations of the twelve gods, and paintings of the Lares and serpents—themes previously found—there occur rarer subjects, some of which show interesting oriental connections. On one of these frescoes from the front of a shop in the street of Abundance, we find a rather crude representation of Venus Pompeiana, the goddess with



FIGURE 1.—VENUS POMPEIANA: POMPEII.

whose cult we are concerned.¹ She is represented with her usual attributes, a rudder of a ship, a sceptre, a branch of olive or myrtle, and Cupids (Fig. 1). The figure is none too artistic, but the type presents one known to us from paintings discovered earlier and

¹ Della Corte, *Not. Scav.* 1912, pp. 138; 176 ff.

reproduced in poor copies. In some of these examples the goddess appears with only one Cupid, but the Venus type is constant. In a painting from the house of the Dioscuri she is clad in a gold-starred mantle of blue (Fig. 2). She wears a turreted crown set with emeralds and bears a sceptre and branch of olive. Her left arm rests on the upturned rudder of a ship and beside her a Cupid stands on a pedestal and holds up a mirror before the goddess.¹

Other representations of Venus Pompeiana, poor at best in the reproductions, show the same features. Sometimes she is pictured with other divinities (Fig. 3). In this case, she is associated with Vesta and the Lares, with the Sarnus below and a serpent proceeding toward an altar. The same type is found again in Fig. 4, where Jupiter is shown at the left and the familiar figure of Venus Pompeiana recurs, robed now in a blue mantle and violet chiton.

More interesting for us than this group of frescoes is a new representation of the goddess from a pilaster of shop No. 7 in the newly excavated part of the Via dell' Abbondanza. Here, Venus Pompeiana, the tutelary divinity of the city, is represented drawn by a quadriga of elephants (Fig. 5). The goddess wears a long blue garment and mantle, and a turreted crown set with eight great emeralds. She rests her left hand on the rudder of a ship and bears an olive branch and sceptre. Her chariot has the form of a ship's prow and two familiar Cupids fly toward her, one bearing a palm branch, another a wreath, while a third one beside her holds up a mirror. At the left of the scene, Fortune, standing on the globe of the earth, places one hand on a ship's rudder and holds in the other a cornucopia. Balancing her at the right is a second figure, usually interpreted as Abundantia, with patera and horn of plenty. It would seem, however, to be a male figure and is more probably a Genius. But one of the most interesting features in the scene is the group of four grey elephants which draw the chariot, the two central ones bowed down under a yoke,



FIGURE 2.—VENUS POMPEIANA: NAPLES.

¹ The actual condition of this fresco may be seen from the more recent reproduction in Herrmann, *Denkmäler der Malerei*, pl. 123. Here, it is much restored.

the outer ones fastened to these by harness, and all four adorned with golden ornaments. What is the significance of the scene and how is it to be interpreted? The goddess is obviously Venus Pompeiana, clad in her familiar starry mantle and with her usual attributes.

Venus Pompeiana was apparently celebrated in cult ritual after the founding of the Sullan colony at Pompeii, in 80 B.C. At that time, the colony was named Colonia Cornelia Veneria

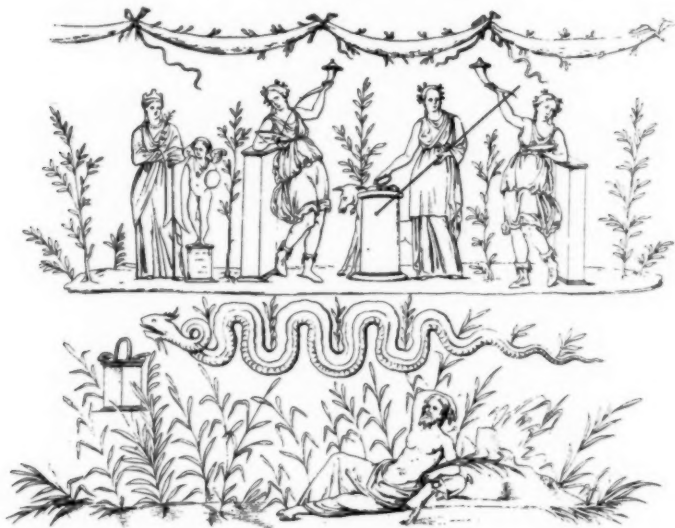


FIGURE 3.—VENUS POMPEIANA, VESTA AND THE LARES; BELOW, THE SARNUS: NAPLES.

Pompeianorum, from the family name of the Dictator, Lucius Cornelius Sulla Felix and from the goddess to whom he paid special honors. Sulla entertained the idea that he was the favorite of Venus and honored her especially as a goddess of Fortune under the name Venus Felix.¹ He represented her on *aurei* struck outside of Rome while he was engaged in his campaign against Mithradates (Fig. 6). On these coins the head of

¹ Plut. *Sulla*, 34; Appian, *Bell. Civil.* I, 97; cf. G. Wissowa, *Gesamm. Abh. zur Röm. Rel. und Stadtgesch.*, München, 1904, pp. 17 ff., 23; Mommsen, *Gesamm. Schriften*, V, p. 509; G. Wissowa, *Religion und Kultus der Römer*, 1912, pp. 291 ff.

the goddess appears crowned by a diadem. Before her stands a Cupid holding a palm branch, the symbol of Sulla's victories in 85 B.C.¹ We recognize this Sullan Venus Felix in various frescoes of Venus Pompeiana, the tutelary goddess of the Sullan colony. Because of the peculiar character of her cult, which was closely akin to that of Fortuna, she is accompanied by attributes of Fortune,—a rudder, a ship's prow and a branch of olive. Mau has identified her temple, dating from the early days of the Sullan colony in some ruins of tufa near the Forum, overlooking the sea.² The original structure was replaced in the Empire by an important temple of marble. The essential feature of the cult of Venus Pompeiana is that she is practically a Sullan creation—a mixture of Venus-Aphrodite and Felicitas, introduced by the dictator after his victories in the East.³ She is not a goddess of fertility native in Campania, as some have argued. The attributes which characterized the goddess in later frescoes were already stamped upon her; for the most part, in the days of Sulla. Another development of her cult was in the direction of Venus Victrix. In the temple which Pompey erected in 55 B.C. in connection with his theatre in Rome, she was united with Felicitas. Both of these cults, Venus Felix and Venus Victrix, were later crowded out in great measure by the Caesarian cult of Venus Genetrix, the founder of the Julian race, but the cult of the Sullan colony showed a remarkable vitality.

The fresco in question, which bears the representation of Venus Pompeiana, probably dates from the last period of the city. The paintings have been often renewed, but the uppermost layers appear to belong to the later days of the city. This is also borne

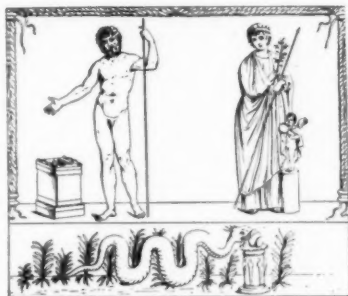


FIGURE 4.—VENUS POMPEIANA AND JUPITER: NAPLES.

¹ G. F. Hill, *Historical Roman Coins*, 1909, pp. 93-94, pl. xi, 55; cf. Plut. *Sulla*, 34.

² A. Mau, *Rom. Mitt.* XV, 1900, pp. 270 ff.

³ G. Wissowa, *Religion und Kultus der Römer*, 1912, p. 291.

out by coins found in this region which date mostly from the Neronian period. When did Sulla's Venus-Felix-Pompeiana-Fortuna cult acquire elephants to draw the chariot of the goddess and what do they mean?



FIGURE 5.—VENUS POMPEIANA IN A QUADRIGA
DRAWN BY ELEPHANTS: POMPEII.

Obviously Rome took over the elephant from the orient, where it was employed for various ends. It first became known to the Greeks in the days of Alexander, who captured a number which had been used in battle against him. He probably employed them to bear burdens and to arouse fear in the enemy. After Alexander's death, the "military era of elephants" followed for three centuries, and the various elephants acquired by him were apportioned out among his generals and used as fighting tanks. Their use in battle is, perhaps, reflected on coins of Seleucus I (312-280 B.C.), where Pallas is represented in full armor in a

chariot drawn by four elephants (Fig. 7). Elephants were also used by the Ptolemies in elaborate processions and they often drew the images of the gods.¹

Coins of Ptolemy Soter and his son bear the device of Pallas and Jupiter in elephant-drawn chariots, so that the practice of representing the gods in quadrigae of elephants goes back to the Alexandrian age. Fig. 8 gives

two coins of Ptolemy with a probable representation of Alexander as Zeus Ammon, holding a thunderbolt.

It is interesting to trace the growing interest in elephants at Rome beginning with the days of Pyrrhus.² Legend says that at the battle of Ausculum, in 279 B.C., the elephants of Pyrrhus were frightened by the grunting of swine on the Roman side.³ In 273, five elephants taken in battle at Beneventum, were led in triumph in Rome and it was probably apropos of this event, when elephants were

first seen in Rome, that a "brick" was issued at Capua, bearing on the obverse an elephant, on the reverse a sow.⁴ At that time money with the device of an elephant was issued by the consul,



FIGURE 6.—VENUS POMPEIANA:
COIN OF SULLA.



FIGURE 7.—PALLAS IN QUADRIGA OF
ELEPHANTS: COIN OF SELEUCUS I.



FIGURE 8.—ALEXANDER AS AMMON IN QUADRIGA OF ELEPHANTS:
COINS OF PTOLEMY SOTER.

¹ Athen. V, 34.

² Plut. *Pyrrhus*, 15, 17; Pliny, *N.H.* VIII, 6, 6.

³ Ael. *De Nat. Animal.* I, 38.

⁴ G. F. Hill, *Historical Roman Coins*, p. 26, pls. VII-VIII; cf. Haeblerlin, *Systematik*, p. 54.

Curius Dentatus. Elephants were also used extensively in the first Punic War by the Carthaginians.¹ After the Roman victory over Hannibal at Palermo in 251, the elephants which caused his defeat were taken to Rome by Metellus, the victorious consul, and four hundred of them were killed in the circus.² A denarius



FIGURE 9.—JUPITER IN BIGA OF ELEPHANTS: COIN OF THE CAECILIAN FAMILY.

of the Caecilian family, struck about 92 B.C., refers to the famous victory and triumph (Fig. 9). The coin was probably issued by C. Caecilius Metellus, and bears on one side the head of Roma, on the other Jupiter in a biga drawn by elephants. He holds a thunderbolt in his hand and above him flies Victory. This type and later ones perpetuate the mo-

tives found on Ptolemaic and Seleucid coins.

After the period of the wars with Carthage, the most important references to elephants in Rome associate them with the names of Caesar and Pompey. Pompey, after his African campaign in 79 B.C., desired to enter Rome in a quadriga of elephants, but was prevented because the gate was too small to admit them.³ He introduced elephants into the circus at the dedication of his theatre and temple of Venus Victrix in 55 B.C., but was cursed by the populace, who found it difficult to endure the suffering of the beasts.⁴

Elephants were associated with Caesar at Thapsus, where they appeared in the line of battle and caused the defeat of Juba, who had placed them there.⁵ The fifth legion, which distinguished itself in the struggle against these animals, had the privilege of bearing on its standard the image of an elephant. At this time, the coins of Caesar, which bear the device of an elephant, were probably struck in allusion to the victory at Thapsus and to the name of the conqueror which in the Punic tongue meant "ele-



FIGURE 10.—COIN OF CAESAR STRUCK AFTER THAPSUS.

¹ Polyb. I, 33; Livy, XXI, 28, 35, cf. 55; 37.

² Pliny, *N.H.* VIII, 6.

³ Plut., *Pomp.* 14; Pliny, *N.H.* VIII, 2.

⁴ Cic. *ad Fam.* VII, 1, 3; Pliny, *N.H.* VIII, 7.

⁵ Dio, XLIII, 8; Appian, *Bell. Civil.* II, 96.

phant" ¹ (Fig. 10). According to various authorities, the Phoenician word *cessarah* can mean: *tergum elephanti vel scutum ex corio elephanti confectum*.² Caesar probably adopted the coin device as an allusion to conquered Africa and because of the punning element involved in the name. He had, however, previously, employed it after his victories over Ariovistus in Gaul (Fig. 11). Here, an elephant is shown on the obverse trampling on a serpent; on the reverse are sacrificial implements alluding to the office of Pontifex Maximus. An almost exact duplicate of this coin bears the name of Hirtius, the legate of Caesar³ (Fig. 12).



FIGURE 11.—COIN OF CAESAR IN GAUL.



FIGURE 12.—COIN OF HIRTIUS.

Caesar also employed elephants on his triumphal return from Gaul, when he entered the capital by night, lighting the way with forty torch-bearing elephants.⁴

Augustus seems to have shown the same predilection for elephants, and many coins of the Augustan age bear the elephant, apparently used as a symbol of victory and triumph. The conquest of Egypt undoubtedly caused their employment to be more frequent. The practice of using them to draw the chariot of deified emperors and members of the imperial family, came into Rome from Egypt at this time. In Fig. 13 we have two Augustan coins dating from the year 17 B.C., which bear the head of Octavian on the obverse and on the reverse a triumphal



FIGURE 13.—COINS OF AUGUSTUS.

¹ Serv. ad Aen. I, 286; cf. Cohen, *Méd. Imp.* ² I, p. 17; Duruy, *Hist. of Rome*, III, p. 464.

² De Vit, *Onomas.* II, 40.

³ Babelon, *Monnaies de la Rép. Rom.* I, 543, No. 3.

⁴ Suet. *Dir. Jul.* 37.

arch placed on a viaduct of small arches and surmounted by a biga of elephants, in which Augustus stands, crowned by Victory. The triumphal arch relates generally to the victories of Augustus

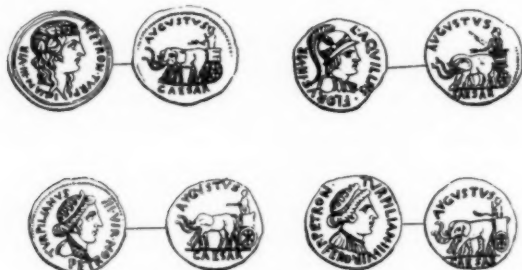


FIGURE 14.—COINS OF TRIUMVIRI OF MINT UNDER AUGUSTUS.

or his commanders in the East, but more especially to those in Africa between 34 and 19 B.C., during which period the Fasti record no less than five triumphs in that portion of the Empire.¹ The various coins issued by the Triumviri connected with the mint about 20 B.C., also make allusion to the same victories (Fig.



FIGURE 15.—DEIFIED AUGUSTUS IN QUADRIGA OF ELEPHANTS: COIN OF TIBERIUS.

14). We have further a reference which records the erection by Augustus, of four elephants in a kind of black glass in the temple of Concord.²

After the death of Augustus, a medallion was struck by Tiberius on which was depicted a statue of Augustus in a chariot drawn by four elephants accompanied by guides (Fig. 15). The coin dates from the year 36 A.D., and is our earliest Roman example of a deified emperor in a quadriga of elephants. The same honor appears to have been voted by the Senate for Livia, Vespasian, Julia, Faustina the Elder and Pertinax.³

In conclusion, we may say that the elephant was symbolic of the orient in the early days of Italy. The wars with Africa brought the elephant into battle with the Romans, often

¹ H. A. Grueber, *Coins of the Roman Republic in the Br. Mus.* II, p. 39 and note 3.

² Pliny, *N.H.* XXXVI, 67. I owe the reference to Miss M. B. Wesner.

³ Suet. *Claud.* 11; Pliny, *N.H.* XXXIV, 10; Dio, LXXV, 4.

with terrifying results. Led in triumphal procession after battle, it thus came to mean the conquered orient, and its use in this connection was especially prominent in the wars with Carthage, after Thapsus and following Augustus' victories in Africa. In the days of Trajan and Hadrian,



FIGURE 16.—COINS OF TRAJAN.

such allusions were still common (Fig. 16). In the reign of Augustus, in addition to this symbolism, the suggestion that the persons drawn by elephants were divine assumed prominence.



FIGURE 17.—DEIFIED AUGUSTUS AND LIVIA: COIN OF NERO.

The Romans were undoubtedly familiar with the eastern practice of placing gods and deified rulers in elephant-drawn chariots. The suggestion of divine association thus involved, must have attracted Augustus, and we may well believe that the

medallion of Tiberius would have been very acceptable to him. After the reign of Augustus, the custom of placing deified rulers in such chariots was very frequent, judging from the devices on coins. On coins of Nero, we see the heads of Nero and Agrippina accompanied on the obverse by two figures considered to be Augustus and Livia, in a chariot drawn by four elephants (Fig. 17). In the days of the Antonines, similar coins are also found. Faustina is seen represented in the same fashion (Fig. 18). Sometimes, she is shown under the guise of Ceres (Fig. 19).



FIGURE 18.—DEIFIED FAUSTINA IN BIGA OF ELEPHANTS.

What of Venus Pompeiana?¹ She began at Pompeii by being a special cult, favored by Sulla, a mixture of Fortuna and Aphrodite.



FIGURE 19.—
DEIFIED
FAUSTINA
AS CERES.

By the days of Nero she had taken on some of the pomp which the orient was accustomed to display in placing its gods in elephant-drawn chariots. Pompeii was a city more open to oriental influence than any other Roman site except its neighbor, Puteoli, the early harbor of Rome. The oriental cults which flourished at Pompeii show the extent of this power. Isis had her temple there, though her worship was suppressed many times at Rome between the years 58–48 B.C. The influence of Egypt is extensively seen



FIGURE 20.—AFRICAN ANIMALS: FRESCO FROM POMPEII.

¹ The recent article by Delle Corte, *Ausonia*, 1921, on Venus Pompeiana, came to my notice after the writing of this paper. He gives a list of illustrations of Venus of Pompeii and wishes to add to the list the *pompa* formerly assigned to Cybele, which is illustrated in *Not. Scav.* 1912, p. 110, fig. 7. A second article by Pais, available after this paper was in press, considers the fresco an allusion to Pompey's African triumph and to his attempt to enter Rome in 79 B.C. in a quadriga drawn by elephants. This does not, however, account for the later practice of representing deified emperors and members of the imperial family in chariots drawn by elephants, nor for the prominent part which the elephant plays in the Julio-Claudian house. The attributes of Venus must also be accounted for and the peculiar character of her cult at Pompeii. The actual date of the fresco in question furnishes an additional difficulty. The frescoes have been renewed several times but the upper layer appears to belong to the last period of the city. Pais considers the figure at the right of Venus, Felicitas. E. Pais, 'Venere Pompeiana trionfante su di un cocchio tirato da elefanti e le gesta di Cneo Pompeo Magno,' *Bollettino dell' Associazione Archaeologica Romana*, IV, 1914, pp. 256–267.

in Pompeian mosaics showing animals from the Nile and in frescoes such as Fig. 20, where various African animals appear. The direct influence of Egyptian life and customs on Pompeii may thus have been strong enough to account for the type of Venus drawn by elephants. She may be only a descendant of the Alexandrian deities, borne in similar chariots. It is, however, tempting to see in the fresco some of the influence very prominent in Rome under the Julio-Claudian house, which used the elephant in a symbolic way as emblematic of their triumphs over Africa, to add pomp to the ruling monarchs and to suggest their divine character.

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Inscriptions
Athenian

THE NEW ATHENIAN STELE WITH DECREE AND ACCOUNTS

THE new edition of the pre-Euclidean inscriptions will contain, as *I.G. I²*, 88, 89, the inscriptions on the Athenian stele found in May-June 1921, communicated by Professor von Wilamowitz-Moellendorff to the Berlin Academy on July 27, 1922 and recently published in the *Sitzungsberichte* of that Academy. As there was no photograph attached to the above mentioned publication, I now give photographs (Figs. 1 and 2) showing details of the two inscribed sides of the stele with the three fragments put together (height 58 cm., width 38 cm.). They were taken by Dr. G. Welter of Athens.

Since the recent publication in the *Sitzungsberichte*, Professor Hiller von Gaertringen has received many contributions, which make it possible to come a step nearer to the solution of the problem. The restoration *θυρόματος* (l. 1) instead of the former restoration *ἀγάλματος* seems to be generally adopted. So the function of the *ἀρχιτέκτων* becomes more evident, the drawing (*γράμμα*) fits better with *γράφειν* than the "non-plastic" *παράδειγμα*, and last, not least, in 414 B.C. the audience of Aristophanes grasped instantly his allusion in *Birds*, 613 ff., cited by Professor Vollgraff.

I reproduce below the text of the inscription with its new restorations:

(*I.G. I²*, 88)

(Stoichedon 37 letters)

Frag. I

..... ιεια [..... περί δὲ τῷ θυρόματος τ]-
[ὄν δέμ]ον διαχ[ειροτονῆσαι, εἴτε ἐχ χαλκῷ χρέ π]-
[οῦν] ἔ ἐλέφαντο[s καὶ χρυσῷ · ἡπότερα δ' ἂν τοῖ δέ]-
[μοι] δόχσει, ταῦτα ἔναι καθ[άπερ ἂν εὐχάριστον]
5 [εἰ κ]αὶ τῷ θεῷ καὶ Ἀθηναί[ο]ν τῷ πλέθει. ν τὸν δ]-
[ε βο]λόμενον γράφσαντα ἀποδ[εικνύναι γράμμα]
[δέ]κα ἔμερῶν, ἐπειδὴν δόχσει · [ἔστο δὲ μὲ ἐλαττο]-
ν [ε] πεχ[υ]αῖον. γραφόντων δὲ ἀ[αγγε] (ι) λαντες πρὸς]

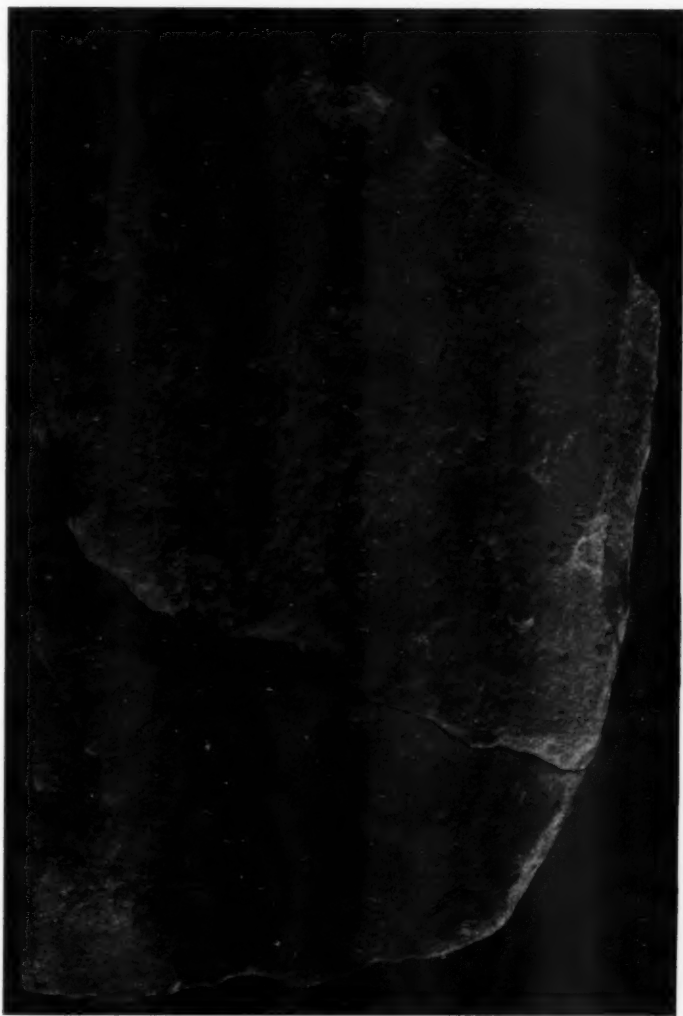


FIGURE 1.—NEW ATHENIAN STELE (*I.G. I², 88*): SIDE A.

- τ[ὸ]ς ἐπ[ι]στάτας · ἐ δὲ βολὴ μὲ ἀ[πολαμ]βάνετο πλὴν]
- 10 [ἐὰ]ν κ[ρι]θεῖ το π .. τ τὸν βολο]-
 [μέ]νο[ν] 'Α]θENAÍ[ON] καὶ τὸν χουμ[μάχον]]
 ... ο εἰ ἡ[ὸς] ἀν] ἡ ἀρχιτέ[κτον] κελεύσει ...]
 . εἰς ἐς ἐν τῇ πρότ[ει] ἡέδραι]
 [..... τ]ὸν δρύφακτο[ν] κ]-
- 15 [ατὰ τὸ πρότερο]ν φσέφισμ[α] · ἡ δὲ μισθοσάμενος]
- Frag. II
 [θ]έσθ[ο] καὶ ἐχσερ]γασάσθo [ὸς κάλλιστα. περὶ δὲ τ]-
 [ὸ] μισθὸ αὐτῷ ἡ βολὴ ἡε νέ[α] μετὰ τε τὸν ἐπίστα]-
- Frag. I
 [τ]ὸν καὶ τὸ ἀρχιτέκτονος π[ροβό]λευμα ἐχσενεγ]-
- Frag. III
 [κ]έτο ἐς τὸν δέμον. τούτον [δὲ χουμπάντον συνεπ]-
- 20 [ι]μελόσθον ἡοὶ ἐπιστάται [τὸ νέο τὸ ἐμ πόλει ἐν]
 [ἡοὶ] τὸ ἀρχαῖον ἀγαλμα. ἐπ[ειδὰν] δὲ δόχσει, διοι]-
 κὲν ἡος κάλλιστα. ἀργύρ[ιον] δὲ δότο ἡο ταμίας ἡ]-
 ο τῆς θεῷ ἡόθενπερ ἐς τὸ[ν] νέον]

vacat

Line 1 [τὸ ἀγάλματος]. Line 6 ἀπο]θῆναι παράδειγμα]. Wilamowitz proposed γράμμα. Hiller von Gaertringen ἀποδείχσαι. Line 9 μὲ ἀ[πολαμ]βάνετο], Bannier.



FIGURE 2.—NEW ATHENIAN STELE (I.G. I², 89): SIDE B.

THE INSCRIPTIONS OF ATHENA NIKE

THROUGH Mr. Pogorelski's kindness in showing me the manuscript and photographs for the foregoing article, I have been enabled to clarify some ideas suggested by the previous publication of the new inscription of 1921 by Professor Hiller von Gaertringen.¹ For the architectonic character of the stone, a feature not hitherto sufficiently considered, seems to be of importance in the solution of the problem.

The present maximum width of the stone is 0.38 m.;² but since the restoration of Face A gives thirty-seven letters to the line, the axis of the nineteenth letter, 0.275 m. from the finished left edge of the stone, must lie at the centre of the stele, thus giving the original width as 0.55 m. Conversely, the centre of the stele, which must lie 0.275 m. from the finished right edge of Face B, coincides with the axis of the central preserved Δ in the last line; if, therefore, we restore twenty letters to the right, as suggested by Professor Hiller von Gaertringen, there would be forty-one letters in each line. But with forty-one letters, the outermost letters would reach exactly to the edges of the stele, an impossible state of affairs; there must have been, as on Face A, a margin of the width of one letter at each edge, thus reducing the number of letters to thirty-nine; and it happens that a reading suggested by Professor von Wilamowitz-Moellendorff, *κεφάλαιον ἀναλογμάτων τῶν ἐς τὸν νεὸν τῆς Νίκης*, exactly fits this space. Starting with the restoration of thirty-seven letters per line on Face A, we have ascertained that the original width was 0.55 m., and that Face B had thirty-nine letters per line.

Below each inscription the surface is blank; we are apparently near the bottom of the stele. If we assume about 0.10 m. of blank surface below the last line of Face A, we should then have about 0.41 m. of blank surface below the last line of Face B; more than this seems improbable. Now the thickness of the stone, according to the former publication, is 0.104 m. at the uninscribed

¹ *Sitzb. Berl. Akad.* 1922, pp. 187-192.

² Given, by error, as 0.58 m. in Hiller's article.

bottom of Face A, and barely 0.09 m. at the top, a taper of 0.014 m. in about 0.52 m., a rate of 0.027 m. per metre of height. At the very bottom, therefore, the thickness was probably 0.106 m.

Where, among the Acropolis inscriptions, do we find an analogy for such a stone? So far as I have ascertained, the only similar stele is the well known building inscription of the temple of Athena Nike, the goddess who is mentioned on Face B. For this other inscription, likewise found on the north slope of the Acropolis, in 1897, has the same taper of 0.027 m. per metre of height.¹ But it could not fit above or below the fragments found in 1921; for its complete width is only 0.38 m., and the thickness varies between 0.101 m. and 0.093 m. We may, therefore, assume that the stele of 1897 once stood beside the stele of 1921, both referring to Athena Nike, each 0.106 m. thick at the bottom,² and of uniform height.

But, it may be objected, the stele of 1897 has an original top, and this is 0.093 m. thick, and was not, therefore, at so high a level as the missing top of the stele of 1921. And even though the top of the inscription of 1897 is tooled as a joint, and provided with two dowel holes for the securing of an upper stone, yet this upper stone might have been an acroterion or decorative relief, and thus very different from the upper part of the stele of 1921. Such objections, however, could be met on two grounds. The joint at the top of the stele of 1897 is of peculiar form, sloping down toward the back, and is, therefore, quite unsuited for the reception of a bottom moulding of an acroterion or relief, though it happens to be the strongest form of a splice or scarf-joint. That we must, furthermore, assume the existence of an upper portion of the stele, spliced to the lower part in this way, is shown by the fact that the inscription of Face A, though we have its very first line,³ does not begin with the full decretory formula, and consists solely, therefore, of amendments; the main decree, passed evidently in the same month but on a preceding day,⁴ must have

¹ A.J.A. 1913, p. 376.

² The stone of 1897 preserves the end of the inscription on Face B, and that on Face A could not have been much longer, so that the height of about 0.18 m. which I allow below the present bottom of the stone is more than sufficient.

³ Ziehen, *Leges gr. sacr.* II, 11; Dittenberger, *Sylloge*, 3rd ed., No. 63.

⁴ This is to be inferred from the manner in which the amendments on Face A are introduced, without mention of the prytanizing tribe or of the secretary, but with a new *epistates*. I restore the beginning as follows: [ἔδοχεν τῇ βουλῇ καὶ τῷ ἐπιστατῇ] [δὲ] [μοι] . . . | . . . ἐπιστατῇ Ηιππών[υκος] εἶπε.

been inscribed on the missing upper stone, of which the top would have been at the same level as the top of the stele of 1921.

As for the date of the new stele, both Professor Hiller von Gaertringen and Mr. Pogorelski have remarked that the two sides are not by the same hand, and that they probably belong to different years, Face A being the older; but the date hitherto suggested is that of the Peace of Nicias, about 420 B.C. For this late date I can perceive no reason. The size and spacing of the letters on Face A are identical with those in the first three years of the stele of the Propylaea, 437/6 to 435/4 B.C.;¹ the style of the lettering is the same; only minute details, the forms of N and Y, betray the fact that it was not the same hand. I think that we may reasonably attribute Face A to the middle year of these three Propylaea accounts, *i.e.*, 436/5 B.C. This coincides exactly with the date of the beginning of the temple of Athena Nike, which from architectural evidence I have assigned to about 435 B.C. The mention, at this early date, of the supervisors of "the temple on the Acropolis in which (is to be) the ancient image," that is, the Erechtheum, agrees with the date assigned by Professor Dörpfeld to the beginning of the work on the Erechtheum, which, for architectural reasons, I likewise accept. And Face B, which concludes the record of the expenses of the temple, may then be assigned to 433/2 B.C., the probable date of the completion of the work.

As the facts now stand, the approximate dates of these inscriptions would be as follows:

ca. 450	First building decree.	Stele of 1897, Face A.
436/5	Second building decree.	Stele of 1921, Face A.
433/2	Conclusion of expense accounts.	Stele of 1921, Face B.
ca. 420	Reënactment of decree for priestess.	Stele of 1897, Face B.

The original site of these two stelae might logically be sought in the neighborhood of the temple of Athena Nike. Now it happens that near the northeast corner of that temple, beside the stairway descending to the main approach, is a bench backed by a Z-shaped parapet, contemporary with the Propylaea and forming a suitable

¹ The height of the letters is 0.013 m. in both; the axial spacing of the letters is 0.014 m. in the new stele, 0.0135 m. in the Propylaea; the spacing of the lines is 0.0215 m. in the new stele, 0.0218 m. in the Propylaea.

shelf for the exhibition of stelae. The northern arm of this parapet was occupied, probably at about 175 B.C., by the equestrian statue which Pausanias wrongly identified as a son of Xenophon; whether or not older stele cuttings are now concealed under this statue plinth I do not know. Of the central arm, the northern half retains only one edge of the top, and the southern half is immured in the south face of the Nike Pyrgos so that its top cannot be examined. But the southern arm, forming the return against the stylobate of the Propylaea, contained a stele socket 0.062 m. deep and 0.11 m. wide,¹ exactly suitable for the stelae under discussion. The present length of this broken socket is only 0.37 m.; the original length might well have been slightly more than 0.38 m. or, better still, 0.55 m. And the panel of protective surface which still remains on the adjoining great pier of the Propylaea, 0.30 m. wide and rising 1.357 m. above the stylobate, perhaps was not removed just because of the proximity of one of these stelae. So placed, one on the south arm and one on the central arm, the two stelae would form another incident in the long strife between Mnèsicles and Callicrates, the alternate concessions and annexations of territory, culminating in the seizure of a part of the Propylaea for the posting of the records of the temple of Athena Nike.

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¹ This fragment now lies in the Braurion near the south wall of the Acropolis.

THE METOPES OF THE ATHENIAN TREASURY
AS WORKS OF ART¹

THE metopes of the Athenian Treasury at Delphi² raise especially significant aesthetic problems, due to the fact that they are works made in the first, fine (though not careless) rapture of Athenian artistic adolescence.³ They are valuable, to be sure, in other respects. The student of art can trace in them technical progress and the development of motives, and the student of social ideals finds there data regarding Athenian interests and purposes in the increased devotion to Theseus rather than Hercules as a national hero.⁴ But they are also works of art, to be judged on aesthetic grounds. Here we must disregard the circumstances of their creation, the technical limitations of the times, the ideas suggested to the sculptors by their community, even the aims of the artists themselves. The question is quite simple: In what respect and to what degree do the sculptures arouse in us that experience we call aesthetic? It must be answered in terms of principles applicable generally to decorative sculpture.

The problem may conveniently be resolved into two elements: the representational content and the formal design.

I

Battered and disfigured as the fragments are, they nevertheless repay study from the following points of view: the aesthetic

¹ I am greatly indebted to M. Homolle for affording me every opportunity to study these sculptures in detail; also for giving me permission to reproduce illustrations from the *Fouilles*.

² Heliogravures of most of the metopes will be found in the *Fouilles de Delphes*, IV, pls. 38-48, and convenient reproductions in Chapter X of F. Poulsen's *Delphi*.

³ Between 520-485. In general American and German scholars favor the earlier date, the French the later one. I am fairly sure the correct date is following Marathon.

⁴ For a delightful paper on this subject see E. Pottier, 'Pourquoi Thésée fut l'ami d'Hercule,' in *Revue de l'art ancien et moderne*, 1901, pp. 1 ff., also E. Bourguet, *Les Ruines de Delphes*, pp. 108-114.

significance of the situation chosen for presentation; the selection of essentials to express it; the treatment of detail.

It will be necessary first to understand the subject matter of the metopes. As a result of study made at Delphi, I have established to my own satisfaction what the sculptures represent and how for the most part they were placed on the building. On the south side were the adventures of Theseus, in the following order, starting at the east end.

Theseus and Athena
Theseus and Sinis
Theseus and the Crommyonian sow (?)
Theseus and Sciron
Theseus and Cereyon
Theseus and Procrustes (wrongly called
Periphetes by Poulsen)
Theseus and the Bull of Marathon
Theseus and the Minotaur
Theseus and the Captive Amazon

On the north side were the adventures of Heracles, in the following order, starting at the east end:

Heracles and the Lion
Heracles and the Hind
Heracles and the Centaur
Heracles and Cygnus
Heracles and Orthrus
Geryon
Cows of Geryon (three metopes)

On the east and west sides were Greek-Amazon scenes, of which it is impossible to assign any one definitely except XLIII, which went in the southwest corner.

A few of these metopes represent a situation of repose. The one which pictures Theseus receiving Athena's blessing (Fig. 1) produces that effect of poise and restrained power, that "life-enhancing" quality attained only in great art. The aesthetic experience it gives is not unlike that of the Charioteer in the adjoining room of the Delphi Museum. Both live in a serene world of their own, "all breathing human passion far above."

But the situation for which these metopes are distinctive is that of vivid action just following a crisis, when the result is

obvious, but the elements of struggle are not yet fully resolved. Theseus has secured the upper hand over each of his foes, but in only one case has resistance completely disappeared. The bull's braced legs, the protesting arm of the Minotaur, even Cercyon's



FIGURE 1.—THESEUS AND ATHENA: DELPHI.

weary body, refuse to admit defeat. In the Heracles metopes, two bodies of Geryon are falling, but the third strides on; Cyenus still holds his shield and probably grasps his sword (Fig. 2), the lion is digging his claws into Heracles' side, and the hind and centaur are firmly braced on their rear legs. The Amazon on horseback is fleeing, but turns for a final shot; the one led captive holds back stubbornly; the others are many of them near death, but the victory has not been completely achieved.

The aesthetic appeal of this type of situation will appear better if we consider first two other moments which might have been chosen: the struggle on even terms, the rest following a triumph. In the case of the former (as in several of the so-called "Theseum"

metopes) there would be an equivalence of forces in opposition; a situation which, instead of having tonic quality, produces either the sense of strain amounting to discomfort in keying us up to such a pitch without giving a solution (as if in a tragedy the action



FIGURE 2.—HERACLES AND CYCNUS: DELPHI.

stopped precisely at the moment the crisis was reached), or of the sheer futility of preserving a moment so lacking in decision. In neither case is the aesthetic experience very invigorating.

The moment of rest following the triumph gives a satisfactory sense of solution, relieves us of the strain. But it is a tame feeling. We have lacked the exhilaration of sharing in the struggle; our motor reactions are left unsummoned.

The moment chosen for these metopes is more stimulating. It awakens in us our keenest delight in intense activity. We have sympathetically lived through the struggle, yet with no sense of unrelieved strain or futility. Exultation in conflict is combined with the joy of victory, the vigor of action with a promise of

repose. And instead of a mechanical equivalence of forces, we have a wide range of *nuances* possible in the contrast between the victors and those who are being vanquished.

Now for the selection of essentials. If archaic art suffered from an inadequate mastery of technique, it often gained more thereby than it lost. It was forced to confine itself to plastic simplicity, to structural essentials. So we recognize that archaic art is often of greater aesthetic value than the work of periods of higher technical proficiency. It is a mistake to explain our liking for it in terms of some quaint charm, as we might choose an unripe fruit for its acid flavor. No. It possesses real aesthetic value, due to this fact: the artists naturally centered their attention on what Clive Bell has called "significant form."

It would be difficult to suggest improvement in the Theseus-Athena scene in this respect. The dignity of the goddess, the respectful yet self-respecting carriage of Theseus, are expressed with economy of means, subordination of detail, perfect simplicity of pose and gesture. After-crisis action is also suggested in the most convincing way: in the victor by an overmastering arm, the shoulder muscles drawn sharply up and stretched taut; by a knee pressed against a thigh or the back of a beast; by the firm vigor of expanded neck muscles and contracted belly; by a diagonal position of advance slightly extended over the median line of the metope. The conquered are expressed by bodies twisted, falling, or quite bent over; a foot sharply turned under, a broken belt, a head bent in agony against a shoulder, an arm raised to ward off the final blow; and in the Geryon scene most subtly by the relation of the various bodies to the diagonals of the metope. Never is there the rhetorical means of facial expression doing duty for the primary expression of body and limbs. In every case irrelevant detail is ignored in favor of forms compact, taut, sharp-lined and clear-cut. In this respect the metopes achieve real distinction. Modest in their use of the two-figure group, limited in motive, these sculptures are yet of the most genuine aesthetic interest because of their concise treatment of essential form.

The means employed to suggest motion deserve special attention. The moment chosen for representation is, to be sure, one of very tense activity, so that if the situation is brought home at all to the spectator the sense of motion will be aroused more readily than by a scene relatively static, as in most of the Olympia metopes. But here also the sculptors were intelligent and origi-

nal in their plastic reëmphasis of the idea. They placed the figures against the background, neither in profile nor full face, but diagonally, and then treated the planes in such a way that static effects are impossible. Take, for instance, Heracles and the



FIGURE 3.—HERACLES AND THE HIND: DELPHI.

Hind (Fig. 3). If this had been done in profile it would have given to a certain extent a sense of motion, because the action is so violent. But observe how this is intensified by the diagonal twist, so that each figure is in a succession of shifting planes, and by the fact that the greatest height of Heracles is to the right, that of the hind to the left, so that the eye is irresistibly led to complete the circuit. Similarly in the Geryon metope, the warrior falling back sinks diagonally outward in such a way that the curve carries around to the other falling warrior on a shallower level, and from him in turn to the standing figure, in yet lower relief; and he is to the right of the centre, so that the eye starts traveling again toward the falling figure.

An even more daring means is the use of a suggestion of the third dimension.¹ These are reliefs, with a frame, for the metopes are primarily drawings in two dimensions. But the vivid action of the pictures refuses to submit to a frame. So we find the snout of the bull, the head of the dog, the falling Geryon and several of the falling Amazons protruding out over the lower rim. This is extremely effective in imparting the sense of struggle.

As a third consideration I named the treatment of detail. Now, with regard to such a matter as modelling, which demands long experience and atelier tradition, we must expect in work of this period much incompetence. There are certain very apparent shortcomings, notably the handling of the body from chest to hips; the faces are faulty in construction; hair, eyes and drapery evidence sometimes hasty, sometimes inferior, workmanship. All this is apparent, and need not be lingered over. To examine what is praiseworthy is more important.

There is beauty in the modelling of some of the bodies. Even the schematized torso of Heracles has in the sincerity and accuracy of its geometric drawing an appeal; in the Theseus and Athena there is a grace of contour that is charming; and the caressed modelling of the back of Cyenus and of the subdued muscles of the Minotaur is thoroughly accomplished. In the construction of the bodies of the bull and dog the treatment is capable; the eye delights in the contrast between the bull's hard cheek bone and the soft, elastic snout. Muscular detail and drapery are often elegantly done: the crinkly folds of Theseus' chiton, the lion claws about Heracles' neck, the delicately stylized skin folds of the Minotaur, the neck, eye and crisp inner hind leg of the bull.

And, finally, those faces exercise a certain fascination: the full, sensuous naïveté of Theseus; the bright, soft bloom of the features of Heracles; and the curiously pathetic captive Amazon (Fig. 4), whose head reminds one of that poppy of Homer, "drooping heavy after showers of Spring."

II

These sculptures do more than represent people in action. They serve as decorative reliefs. As such they must satisfy certain requirements from the point of view of design. I suppose

¹ This was pointed out by C. R. Post, *Harvard Studies in Classical Philology*, 1909, pp. 142 ff.

one may say that it is in the successful imposition on the *representata* of an adequate pattern that the value of the sculpture as decoration lies.¹

This brings us to a matter of primary importance: the relation of the metopes to the building for which they were designed.



FIGURE 4.—THESEUS AND CAPTIVE AMAZON: DELPHI.

The building is a small, Doric structure, extremely simple and unpretentious. On three sides, the only relief between the bare walls and the cornice is the sculpture. Under these circumstances, it is clearly necessary that the metopes should be simple compositions, in strongly-marked, high-built relief, to harmonize with the key of the building. There is no place here for intricate compositions or delicate low relief. The metopes are in this respect adequate. In being cut in the round and nearly so, they are sufficiently assertive to harmonize with the strong lines of the building, and in their simple compositions, their distinctive clarity

¹ See Rhys Carpenter: *The Esthetic Basis of Greek Art*.

of line, they enrich its simplicity without sacrificing its essential quality. There are no distracting shadows; the light and shade are distributed in broad, coherent masses.

The decorative value of the metopes becomes apparent when we analyze their structure with relation to that of the building. The lines of the Treasury are, in order of importance, horizontal, vertical and (on east and west) diagonal. The metopes serve to mark two transitions: between the (nearly) vertical walls, columns and triglyphs and the horizontals of the entablature; and, on east and west, between the horizontals and verticals of the entablature and the diagonals of the gables.

How is the transition to be marked? Obviously by diagonals and curves. Diagonals give relief to the prevailing lines of the building and curves make the transitions less violent, more pleasing to the eye.¹

A study of the lines within the field will show that they are chiefly diagonal, with curves in the upper part. Certain refinements can be studied on the sides where the placing is fairly sure.

At each end of the south side we have metopes which follow rather closely the lines of the walls. They are constructed chiefly of verticals, so that there is no abrupt break with the wall edge. The diagonals of arms and heads are secondary, but make an initial variation. In the Minotaur metope the diagonals are much more stressed, and the Bull metope continues the diagonals but introduces also very pronounced curved lines. The centre relief is decidedly curvilinear, with hardly a straight line in it.

Similarly in the Heracles scenes, the triangular mass of Heracles and the Lion is toned down at the wall edge by the vertical fold of drapery and the club; and at the other end the cows are in horizontals.

¹ Dorian metopes are almost invariably built on horizontals and verticals. The "Theseum" uses the diagonal, but hardly at all the curve. The Parthenon employs all four freely. The value of the curved line in this position on the building was understood thoroughly by Greek architects. It was used as pure pattern in Mycenaean building, and shields and rosettes are found in many instances, as in the Small Propylaea at Eleusis and the Tholos at Epidaurus. To make the human form express such a pattern seems to me a real achievement of the Treasury sculptors. Doubtless they were aided in doing it by the experience of the cylix painters. The principle of breaking up predominant building lines of verticals and horizontals by sharp diagonals may be studied profitably in the series of reliefs made by E. A. Bourdelle for the Théâtre des Champs-Élysées, Paris.

These are, then, well-conceived compositions to fulfill their function of architectural relief. But observe that they do so in no artificial way. The design is also one perfectly adapted to express the type of action chosen for representation. The pattern is adequate in both respects.

Another question of decorative value concerns the relation of the metopes to each other. We have a right to expect a certain equivalence of masses; no one metope should assume more than its share of attention; the rhythm should be sure, so that the eye passes from one scene to another without difficulty; there should be enough contrast to prevent monotony.

The problem of mass equivalence is met very simply by assigning two figures to each metope. The rhythm scheme is admirable, the abundant use of the curved line leading the eye on irresistibly from one group to the next. Monotony is avoided by the contrasts of direction. The chief limitations are the similarity of grouping, and the too obvious symmetrical equivalence.

We must also say a word about the composition of the individual metopes.

The field is nearly square, only slightly higher than wide. How is this space to be filled? Perhaps some requirements may be formulated.

There must be no space left distressingly vacant.

Fundamental unity must be gained by a balance of masses and a repetition of major parallel lines.

Sufficient variety must be given by a contrast of minor masses, asymmetric balance, minor contrasting lines.

The easiest way of filling a square field is by using vertical and horizontal masses, as was generally done by the Dorian sculptors, and occurs here in the Theseus and Athena, the cows, and the Amazon on horseback; or by crossed diagonals, as in the Heracles and Bull at Olympia. But the problem for sculptors who employed diagonals as those of the Treasury did, is a much more difficult one. The lower part of the field is adequately filled by legs and bodies, but the upper part tends to remain unfilled in one corner when the diagonals are parallel, as in the Cynus scene, or in both when the diagonals form a triangle.

Means of dealing with this difficulty vary in subtlety and success. In certain metopes space is inadequately filled; in others filler, such as stylized drapery and accessories, is used; but for the most part the treatment is more satisfactory. Bent bodies,

inclined heads, outswung arms, helmets, shields and clubs, in perfectly natural fashion fill the space. One very useful means, drapery, is almost entirely neglected.

Unity within the field is a simple matter when the compositions are confined to two figures. Each figure regularly keeps to its half of the field; and the chief lines of legs, arms and bodies are parallel. This is all very simple. Where the compositions cross the line that divides geometry from art is with respect to their use of variation and contrast. Here they show a certain amount of subtlety. In the Minotaur scene the Minotaur's legs follow the parallelism, but the head and body are in fine contrast to those of Theseus. The more sophisticated method of asymmetric balance appears in the Geryon metope, where the warrior still erect is set slightly to the right of the centre, the one falling back is on a sharper diagonal than the one falling forward, in this way bringing the emphasis of the entire composition to the right. The variations produced by curved lines we have previously remarked. Similarly horizontals give relief to diagonal, and diagonals to vertical dominant lines.

This use of diagonals and curves, the most distinctive feature of the metopes of the Treasury, allows infinite opportunity for contrast, and goes far to explain the satisfactory effect of the reliefs in spite of the poverty of motives. In comparison we may again cite the Dorian reliefs, which are as a rule weak in variation. In the early ones, at Selinonte and on the Sicynian Treasury, the field may be arranged as a thoroughly symmetrical geometric pattern. The "Theseum" metopes also err in being too symmetrical. The Geryon scene there, for instance, is much less imaginative than the corresponding one on the Treasury. It is only in the Parthenon that we find decided superiority in this regard, with masses often shifted from the centre to make the symmetrical relation a matter of the group rather than of the single metope, and drapery used to provide a host of delightful minor contrasts and weave the whole design into unity.

I have attempted to analyze some of the elements of these sculptures which may help to account for their aesthetic appeal. But the task of explaining why an object of art appeals to us is a difficult, even an impossible, one. The aesthetic experience is primarily to be felt, not to be analyzed. It is in the fusion of *representata* and pattern that the magic is born, the work of art

emerges; and that fusion defies any adequate formulation. The best that can be done is to distinguish what some of the elements of it are, and to state what the effect of it seems to be. In this case, having done the former, we may conclude by describing the effect: it is one of fresh and spontaneous energy, finding expression in forms clearly conceived and worked out, representing attractive people in terms of a pattern which is soundly decorative.

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INSCRIPTIONAL AND TOPOGRAPHICAL EVIDENCE
FOR THE SITE OF SPARTOLUS AND THE
SOUTHERN BOUNDARY OF BOTTICE

If one desires to go from Salonica to the site of ancient Potidaea he may in summer take the automobile which follows the dirt road along the coast, carrying mail down as far as Athytus or Valta in the peninsula of Pallene (Fig. 1). In winter, however, when the rains have made this route impassable, the traveller is obliged to make a detour through the mountains to the east.



FIGURE 1.—MAP OF CHALCIDICE.

From Galatista and Vasilika the Vasilikiotikos river flows down to the coast below Salonica in a wide and fertile valley through which the highway runs as far as Galatista. The journey over the divide is made on muleback and then the path leads directly down to Polygirus and Potidaea.

From Vasilika south a somewhat more unfrequented route also leads down to Potidaea, passing on the way a series of Turkish and semi-Turkish towns, near some of which there are a few remains of antiquity.

One hour's walk to the east of Avanli and about the same distance south of the Χαλύβια Βαθύνά there appears to be the site of an ancient city. A deep ravine here bounds on the west a rather high hill which slopes gently from the edge of the ravine up to the summit. The summit itself is level, about one hundred yards long and forty broad, extending from north to south. The ground slopes off on the east to another ravine some five hundred yards away, and to the south the ridge gradually lowers itself to the confluence of the two streams. There is a slight saddle between this hill and another larger and slightly higher hill to the north. Between the summit and the ravine on the western side are many fragments of pottery, some of which are clearly from classical times. To the south are scattered about many large worked stones, some whole and some in fragments, which have been taken from the ground by the inhabitants of Avanli for prospective building purposes.

One grave stele is there preserved entire, of limestone, the overall dimensions being 138 by 38 by 29 cm., and on its face near the top is a clearly-cut and well-preserved inscription (Fig. 2):

Ἀλεξάνδρα μετὰ τῶν τέκνων | ἐαυτῆς τῷ ἰδίῳ ἀνδρὶ μνί|ας χάριν
'Αθη|νοδώρω.

The letters are about four centimeters high.

Further south, at Vromosyrta, there is a fragment of an unfluted marble column, 81 cm. long and 38 cm. in diameter, found, as the inhabitants say, at Vromosyrta. On one side there is a fragment of an inscription, much damaged in the course of time, but still partly legible (Fig. 3). The letters are five centimeters high.

[· Γίεωρ (?) | . . . ν ἐποίει.

ΑΛΕΞΑΝΔΡΑΜΕ
ΤΑΤΩΝΤΕΚΝΩΝ
ΕΑΥΤΗΕΤΩΙΔΙ
ΩΑΝΔΡΙΜΝΙ
ΑΕΧΑΡΙΝΑΘΗ
ΝΟΔΩΡΩ

FIGURE 2.—GRAVE INSCRIPTION:
AVANLI.

Vromosyrta is about two and a half hours from the coast and, therefore, situated in the region of Bottice which stretched from Olynthus in early times back to the mountains south of ancient Anthemus. Olynthus was a Botticean city at the time of the Persian wars and as such sent infantry to Xerxes' army.¹ In 480/479, however, it was taken by Artabazus and given to the Greeks of Chalcidice,² thus shifting the southern boundaries of Bottice farther to the north.



FIGURE 3.—INSCRIPTION AT
VROMOSYRTA.

The location of the city of Spartolus, mentioned by Thucydides as the scene of a battle in the Peloponnesian War, and definitely located in Bottice, naturally depends on the extent of the Bot-

ticean territory. Thucydides' account of the plundering expedition of the Athenians is brief.³ With two thousand hoplites and two hundred cavalry they advanced near Spartolus and destroyed the grain, expecting that the city itself would be betrayed to them. But the opposing faction sent to Olynthus and obtained an army which advanced with the loyal men of Spartolus (from Spartolus) to meet the Athenians. The Athenian hoplites were victorious but the lighter troops were routed, just as other peltasts from Olynthus came up as reinforcements to the enemy. The combined forces now attacked the victorious section of the Athenian army and finally put them to flight, pursuing for a long distance. The Athenians fled to Potidaea. This is the substance of what Thucydides says of the course of the battle. His only hint of the distance from Potidaea lies in the remark that the fleeing troops were pursued a long way.

Dimitsas places Spartolus either on the site of the metochion of St. Dionysius (Fig. 4), or somewhat east near the present Portaria.⁴ Leake says nothing of the situation of the town, and Hoffmann locates it generally to the northwest of Olynthus.⁵

¹ Herod. VII, 185.

² Herod. VIII, 127.

³ Thuc. II, 79.

⁴ Dimitsas, *Macedonia*, p. 606.

⁵ Hoffmann, *Griechenland*, I, p. 119.

Kiepert's map places the city on the site of Portaria.¹ A coin with the inscription ΣΠΑΡΤΩΛΙΩΝ was known as long ago as the time of Hoffmann, but its provenance seems uncertain, and even if known could have little weight in determining the location of the city.

So far, then, there is one fixed point some distance to the north



FIGURE 4.—POSSIBLE SITES OF SPARTOLUS.

of Olynthus, through which the southern boundary of Bottice must pass. A boundary stone recently found in the fields of the Metochion Zographou gives us another fixed point, and by extending the boundary between these two a line is obtained, for a short distance at any rate, north of which Spartolus may lie and south of which it cannot lie. The stone was found just south of the village of Vromosyrta. It measures over all 93 by 31 by 22 cm., and contains an inscription of only one word cut on its face in letters of the late fifth or early fourth century. The surface was brought to a finish only where the word was to be cut; otherwise

¹ Kiepert, *Formae Orbis Antiqui, Graecia cum Macedonia et Epiro*, XVI.

it is very roughly dressed. The one word, however, ΒΟΤΤΙΚΟΙΞ (Fig. 5), is enough to distinguish it as a boundary stone delimiting the territory of those who lived in Bottice.¹

Of the three postulated positions for Spartolus, therefore, two cannot hold. The city did not lie either at Portaria² or at the metochion of St. Dionysius. Hoffmann's conjecture is left that it lay northwest of Olynthus. A reference in Xenophon's *Hellenica* gives only a suggestion of probability that it lay west of Olynthus. When Teleutias was killed his men scattered, some going toward Spartolus, some toward Acanthus, some to Apol-

lonia, and the majority to Potidaea.³

It is tempting to take these four places as

ΒΟΤΤΙΚΟΙΞ

FIGURE 5.—INSCRIPTION AT METOCHION ZOGRAPHOU.

marking the four points of the compass,⁴ and yet exactness cannot be required. At Vromosyrta, where the fragment of the marble column was found, there seems to be no sufficient evidence for the site of a city. There are three other possible sites in the sector north of the Olynthus-Vromosyrta line.

At Mariana, a half-hour north of Olynthus and on the west bank of the river of Resitnikia, there is a stele built into the village spring.⁵ It has in spots been worn quite smooth so as to be illegible, but, as the reproduction (Fig. 6) shows, it is possible to decipher the following. The probable restoration is indicated.

Δ[ιω]ξιμάν[δρα] Ὀλιάνω τῷ ἀνδρὶ μνήμης χάριν.

The letters of this inscription are three centimetres high.

It was Mr. Wace's opinion that this stele might have been brought from Olynthus, although the presence of a huge mediaeval tower on a hill near by, built in large part of ancient stones, and the presence of pottery fragments on the hill lead one to sus-

¹ The stone was, when I saw it, used as a horse-block outside the entrance to the court of the Metochion Zographou. The monks expressed their intention of taking it inside the court. The letters of the inscription are 35 mm. high.

² In any case there are no traces of a city at Portaria.

³ Xen. *Hell.* V, 3, 6.

⁴ Xen. *Hell.* V-VII, ed. Bennett, p. 47, note.

⁵ Mentioned by Wace, *B.S.A.* 1914-15, 1915-16, p. 14, footnote 3.

pect the existence here, too, of an ancient city. It must have been relatively small, certainly too small for Spartolus, which was the chief city of all Bottice.

Another site is twenty minutes north of Suphlar, where there are quite a number of ancient blocks scattered about in the fields. Some of the blocks have been used in the construction of the modern town, and in the metochion just to the north, as well as in the wall of the village church, are preserved several Byzantine reliefs. The tradition of the town is that this was ancient Spartolus, and this consideration cannot be entirely disregarded. The third site has been described above, on the hill east of Avanli.

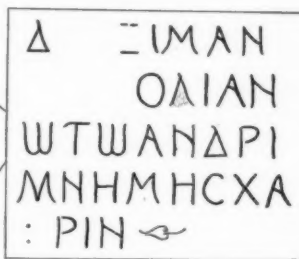


FIGURE 6.—INSCRIPTION NEAR OLYNTHUS.

An Athenian army, advancing on either Suphlar or Avanli, would, however, have left itself exposed to attack from Olynthus, and this consideration has doubtless influenced those topographers who have placed Spartolus close to Potidaea. After the clear definition of the boundary line, however, one is constrained to locate the city north or west of Vromosyrta, and consequently, if need be, look upon the raid of the Athenians as a risky and daring enterprise. As a matter of fact the outcome of events supports this latter view. The last auxiliaries from Olynthus came up *in the rear* of the victorious Athenian hoplites and attacked the two divisions which they had left behind to guard the baggage. It is always possible that the Athenians did not start direct from Potidaea, but landed along the coast from their ships; yet Potidaea was their logical land base and with it they could not well afford to lose communication.

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AN ADDENDUM TO THE ARTICLE ON ANTEFIXES
AND OTHER TERRA-COTTAS, A.J.A.
XXVII, 1923, PP. 1 FF.

SINCE the above article was published I have noticed at the University of Michigan two or three terra-cottas like that on p. 21, fig. 27, which come also from Veii and have a hole in the back by which they could be hung up as votive offerings. Welcome confirmation of the suggestion that they were votive offerings in some temple at Veii has been furnished by Professor Frank Jewett Mather, Jr., of Princeton University, who writes that he saw a heap of such votive offerings piled up at Veii in 1909. There were all possible members, hands, feet, eyes, and many half-heads. All these were votive offerings for cures and presumably the half-heads were thank offerings for relief from hemierania. Possibly the heads minus the occiput are meant to record a frontal hemierania.

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ARCHAEOLOGICAL NEWS¹

NOTES ON RECENT EXCAVATIONS AND DISCOVERIES; OTHER NEWS

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GENERAL AND MISCELLANEOUS

ALBANIA.—Ancient Remains in Muzakhia and Malakastra.—In *Jh. Oest. Arch. I. XXI-XXII*, 1922, Beiblatt, cols. 5-224 (131 figs.), C. PRASCHNIKER reports upon ancient remains examined by him in central Albania in 1917 and 1918. At Apollonia the town walls were studied and remains of private houses examined; also the Doric temple of Stylassi of which one column is still standing. At Krügjata another temple, seen by Leake but since destroyed, was located. It was of the Corinthian order and not later than Flavian times. Many graves are in the vicinity, the earliest going back to the fourth century B.C. About 25 km. south of Apollonia, at the church of St. Nicholas, was a Nymphaeum. At Floç are remains of a settlement; on the Mali Gurdez, a fortification wall; at Byllis, town walls and a theatre; at Kljoš, well-preserved town walls; and other walls at Kalja Krot. The course of the Via Egnatia is traced southward from Dyrrhachium. Several portrait heads, pieces of sculpture in the round and in relief, tombstones, and about a dozen Greek and half as many Latin inscriptions are also recorded.

MALTA.—Excavations at Hal-Tarxien.—In *Archaeologia*, LXX, 1918-20, pp. 179-200 (4 pls.; 21 figs.; plan), T. ZAMMIT presents a third report on his excavation of the remarkable megalithic sanctuary at Hal-Tarxien in Malta (see *Ibid.* LXVII, pp. 127 ff.; LXVIII, pp. 263 ff.). The last campaign has brought to light a third sanctuary, earlier than the other two, adjoining the northeastern end of the northern building previously excavated. It consists of two double semi-elliptical apses, connected by a passage. A notable feature of the inner apse is a small aperture connecting it with a narrow secret room, presumably an oracle. To the east of this structure are the foundations of a massive wall, separating the group of sanctuaries on this side from other buildings. East of this in turn is a large square court, with traces of several rooms to the north and east of it. The main entrance to the southernmost of the

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor DEANE, Editor-in-charge, assisted by Professor SAMUEL E. BASSETT, Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Dr. T. A. BUENGER, Professor HAROLD N. FOWLER, Dr. STEPHEN B. LUCE, Professor ELMER T. MERRILL, Professor JOHN C. ROLFE, Dr. JOHN SHAPLEY, Professor A. L. WHEELER and the Editors.

No attempt is made to include in this number of the JOURNAL material published after June 30, 1923.

For an explanation of the abbreviations, see pp. 128-129.

three temples was further investigated, and it was found that the door was in the centre of a concave façade of upright stones. Parts of the boundary wall to the west of this temple were also uncovered. Among the numerous objects found on the site are animal bones, small implements made of bone, stone implements, flint knives, obsidian flakes, fragments of figurines of animal and human subjects, in terra-cotta and stone, and pottery, including (1) fragments ornamented with incised lines, (2) pitted ware, (3) studded ware (especially well made in Malta), and (4) fragments ornamented with patterns in relief.

A Hoard of Carthaginian Coins.—T. ZAMMIT (*Ant. J.* III, 1923, pp. 157-158; fig.) reports that a farmer found near Micabba in Malta a clay aryballus full of bronze Carthaginian coins, about three hundred in all, in a good state of preservation. All show the head of Persephone on the obverse and a horse on the reverse.

NECROLOGY.—Margaret C. Waites.—Classical archaeology in America has suffered a serious loss in the sudden death of Margaret C. Waites, Professor of Latin in Mount Holyoke College. Miss Waites received the degree of A.B. *summa cum laude* at Radcliffe in 1905, and the degree of Ph.D. at the same college in 1910. In 1912-13 she was Fellow of the American School of Classical Studies in Rome, and also held the foreign fellowship of the American Association of Collegiate Alumnae. Her successful teaching was combined with constant activity in research. She was the author of numerous articles in the *American Journal of Archaeology* and in various philological publications. Her special interest was in Roman and Etruscan archaeology and religion.

EGYPT

ACTIVITIES OF THE SERVICE DES ANTIQUITÉS, 1921-1922.—In *C. R. Acad. Insc.* 1922, pp. 372-380, PIERRE LACAU reviews the achievements of the Service des Antiquités in Egypt during the year 1921-1922. At **Denderah** M. Baraize has made a special study of the temple of Isis. Since the cubical structure which has been known by that name is decorated with figures in relief, not in intaglio, it was evident that this structure was enclosed by other buildings. Excavation has shown that it was surrounded on three sides by a columned portico, while on the fourth side it adjoined a hall, the roof of which was supported by four columns, connected with a structure oriented towards the great eastern gate of the precinct. The portico is paved with re-used stones, two of which show mosaics of faience on their lower sides. The sculptures of the interior of the temple are mutilated, but probably represented the birth of Isis. The plan of the Christian basilica which was discovered at Denderah the preceding year has been drawn, and proves to resemble the plans of the White Monastery and the Red Monastery at Akhmim. At **Karnak** M. Pillet has uncovered the avenue connecting the temple of Amon with that of Mut. Between the seventh and eighth pylons the ground has been cleared to the level of Thutmes III. Here was discovered a fine naos of King Senuosrit I of the XXIst dynasty. The image of the god had been mutilated in the time of Akhenaton. A part of the ninth pylon is constructed of re-used blocks which originally belonged to a temple built by Akhenaton. From the third pylon have been disengaged some admirably carved reliefs which belonged originally to a chapel of Amenophis III. M. Pillet has also been engaged in the preparation of new plans of the monuments of Karnak. At **Saqqara** Mr. Firth

has continued the investigation of the mastabas of the VIth dynasty, and of the dependencies of the pyramids of the same period. The mastaba of Mera is flanked on the east by an inclined plane of masonry, the purpose of which is not known. Its entrance is on the south, since the south side faces the pyramid. A number of tombs of the Middle Kingdom, between the pyramid and the mastabas to the north, have been excavated. These contained few furnishings of interest. At Assuan the great unfinished obelisk has been further freed by Mr. Engelbach. At Assiut, sacred to the wolf-god (its Greek name was Lycopolis), a subterranean tomb yielded an interesting series of ex-votos to this god, comprising more than 600 stelae ranging in date from the XVIIIth dynasty to the close of the Saïte period.

RECENT DISCOVERIES.—In *Scribner's Magazine*, LXXIV, 1923, pp. 34-49 (11 figs.), G. E. HALE gives an account of some of the recent discoveries in Egypt, especially of the tomb of Tut-ankh-Amen and of the temple of Mentuhotep II excavated at Deir el Bahri by the Metropolitan Museum (see *B. Metr. Mus. Supplement*, December, 1922, pp. 19-48; *A.J.A.* XXVII, 1923, p. 75). He also reports on Mr. Engelbach's study of the great obelisk at Assuan. In the trenches surrounding the obelisk were found thousands of dolerite spheres which were used as pounders in separating the mass of the obelisk from the bedrock. Many other details of the process of quarrying and transporting the obelisk are studied in Mr. Engelbach's forthcoming memoir, *The Assuan Obelisk with Some Remarks on the Ancient Engineering*.

MEROË.—The Harvard-Boston Museum Expedition.—In *B. Mus. F. A.* XXI, 1923, pp. 11-27 (29 figs.), G. A. REISNER reports the results of the excavations which he conducted on the site of Meroë in 1921-22 for the Harvard University-Boston Museum of Fine Arts expedition, with special emphasis on the new inferences regarding the political and cultural history of Ethiopia which the recent discoveries justify. Three cemeteries with pyramid tombs were investigated: (1) the south cemetery, where the Meroitic kings of the Ethiopian reigning family were buried from 720 to 300 B.C.; (2) the north cemetery, containing royal tombs of dates from 300 B.C. to 350 A.D.; (3) the west cemetery, containing tombs of members of the royal family, contemporary with the kings buried in the north cemetery. A comparison of the tomb-pyramids of Meroë with those of Napata shows an identical development of types, and is, therefore, an adequate basis for a chronology of the Meroitic kings, and for a history of their varying relations with the kings of Napata and with Egypt. The excavation proved the truth of the literary tradition that upon the death of an Ethiopian king his servants were buried with him. The cultural history of Meroë shows recurring periods of Egyptian influence, separated by intervals of deteriorating craftsmanship. Among the later objects in the tombs are many of Hellenistic and Roman origin, including two similar bronze heads of a Greek god, a bronze head of Athena, a silver goblet with a trial scene in relief, bronze basins and lamps of various types, gold and silver seal rings, gold pendants, buttons, amulets, earrings, and necklaces. Even more interesting than these to the classical archaeologist is a plastic rhyton in the form of an Amazon on horseback, signed by Sotades, the most distinguished maker of such baroque vases in the fifth century B.C. (Fig. 1). It was found in the ruined pyramid of a child of the royal family, in the south cemetery. This and many of the other objects discovered at Meroë are now exhibited at the Museum of Fine Arts in Boston.



FIGURE 1.—RHYTON BY SOTADES: BOSTON.

BABYLONIA AND ASSYRIA

A NEW ASSYRIOLOGICAL JOURNAL.—The first number of the *Archiv für Keilschriftforschung*, under the editorship of Dr. Ernst F. Weidner, has just appeared. In order to save expense of typesetting, the journal is photographically reproduced from typewritten sheets. The price to American subscribers is \$5.00, and it is requested that bills be sent by registered letter to the editor. The high scientific character of the journal may be inferred from the contents of the first number: E. F. WEIDNER, 'Astrological Texts from Boghazköi'; B. MEISSNER, 'Text-Critical Observations on a Medical Compendium'; S. LANGDON, 'Hymn in Paragraphs to Ishtar as the Belit of Nippur'; A. UNGNAD, 'Votive Inscriptions of Kurigalzu, Son of Kadashman-Ḫarbe'; E. EBELING and E. UNGER, 'Cuneiform Texts from Constantinople'; O. SCHRÖDER, 'Sharrat-niphi'; Archaeological News, Notes on Scientific Conferences, Communications, Personal News.

THE LIST OF OLD BABYLONIAN KINGS.—A newly-discovered fragment of the ancient Babylonian dynastic tablet published by Legrain, in *Mus. J.* XI, 1920, pp. 175 ff. leads to fresh attempts at the reconstruction of the list by A. UNGNAD, in *Z. Assy.* XXXIV, 1922, pp. 1-14; and by A. POEBEL in the same number of the same journal, pp. 39-53. The two reconstructions agree in all the main features. We now possess the names and the lengths of the reigns of twenty dynasties before the first dynasty of Babylon, beginning ca. 4000 B.C. The new material now establishes definitely the order of the kings of the dynasty of Akkad, as Sharukin, Rimush, Manishtusu. The only important point that remains still in doubt is the chronological position of the IIIrd Dynasty of Kish, the IId Dynasty of Uruk, and the IId Dynasty of Ur. Some valuable new material on the order and dates of the old Babylonian kings is given also by C. J. GADD in *J.R.A.S.* 1922, pp. 389-396.

ASHUR.—**A New Inscription of Sargon.**—It has long been suspected that the account of Sargon's eighth campaign published by Thureau-Dangin in 1912, and now in the Louvre, was illicitly abstracted from the ruins of Ashur. This suspicion has been confirmed by the discovery among the tablets excavated by the German expedition at Ashur of a fragment which exactly supplements the tablet in the Louvre. In *Z. Assy.* XXXIV, 1922, pp. 113-122, B. MEISSNER gives in transcription and translation, with critical notes, the extremely interesting account of the capture of the city of Ulû by Sargon on his eighth campaign which is restored by this newly-found fragment.

BAGDAD.—**A New University.**—A university has been established at Bagdad through the initiative of King Faisul of Irak. A department of antiquities has been organized, of which Miss Gertrude L. Bell is Honorary Director. (*Bulletin of the American Schools of Oriental Research*, No. 9, February, 1923, p. 2.)

NIMRUD.—**The Bronze Gate of Balawat.**—E. UNGER has made a new and careful study of all the known fragments of bronze originally decorating the double wooden door of a gateway, found near Nimrud in 1877. In *Ath. Mitt.* XLV, 1920, pp. 1-105 (3 pls.; 6 figs.), he gives a résumé of previous publications; a technical description of the fragments and a restoration of the door; an interpretation of the reliefs (representing scenes from the campaigns of Salmanassar during the years 859-848 B.C.) and a discussion of the historical setting; and a transliteration and translation of the inscriptions.

SINAL.—**A Fortress of Saladin.**—In *Syria* III, 1922, pp. 44-57 (3 pls.; 5 figs.; map), J. BARTOUX describes a fortress of Saladin strategically situated on the Sinai peninsula, crowning the plateau of Gebel Raha. Its circuit wall and some of the interior buildings are preserved, including much architectural ornament. *Ibid.* pp. 55-65 (2 pls.), 145-152, 307-328, GASTON WIET publishes and comments on the inscriptions found on this site.

UR.—**The Excavations of 1922-1923.**—In the *Pennsylvania Gazette*, March 23, 1923, p. 531, C. LEONARD WOOLLEY reports upon the excavations which are being carried on at the site of Ur by a joint expedition of the University of Pennsylvania and the British Museum. The outer wall of the enclosure of the great temple has proved to be a massive structure supported by buttresses. The temple has been partly cleared and a large number of inscribed tablets brought to light. They date for the most part between 2200 and 2000 B.C. and are chiefly temple accounts and religious texts. The architectural plan of the

building cannot yet be made out, but it was of great extent and was dominated by a massive tower which must have been visible from a great distance. A treasure, which is later in date than the time of Nebuchadnezzar, was found consisting of gold rings, bracelets, beads, earrings, lockets, pendants, a female statuette of gold, silver vases, bracelets and rings, bronze vases, engraved seal-stones, and great quantities of beads of lapislazuli, carnelian, agate, amethyst and malachite. About fifty different types of pottery have so far been recorded.

SYRIA AND PALESTINE

ACTIVITIES OF FRENCH ARCHAEOLOGISTS IN SYRIA AND PALESTINE.—In *C. R. Acad. Insc.* 1922, pp. 359-369, E. POTTIER describes the constitution of a permanent French Archaeological Mission in Syria and the organization of a French School of Archaeology at Jerusalem under the direction of the Académie des Inscriptions. He reviews briefly the recent archaeological discoveries made by the French in Syria and Palestine. The same report appears in *Syria*, III, 1922, pp. 329-337.

ASKALON.—**Final Report on the Stratification.**—The stratigraphic results obtained during the first season's work at Askalon, though satisfactory, could hardly be regarded as conclusive. Accordingly, during the season of 1922, a similar examination was undertaken of another section of the mound on a much larger scale. The results from this excavation confirm those obtained from the previous one. The foundation of Askalon took place at the end of the early Bronze Age (ca. 1800 B.C.). At first the culture was almost entirely native, and made use of the clays and pigments of the country. About the beginning of the sixteenth century, trade developed with great rapidity, and the vases of Cyprus and of the Mycenaean world superseded the native fabrics. The dividing line between the Bronze Age and the Iron Age, that is, between the Canaanites of Ramses II and the Philistines of Ramses III, is marked by a conspicuous layer of ashes, and also by a change in even the commonest types of pottery. About 1200 B.C. the Cypriote wares disappear, no true Mycenaean imports are found, and the pottery is all of local manufacture. The most characteristic forms are the cups and craters with horizontal loop handles. The most important result of the excavations at Askalon is the determination of the exact dividing line between the Canaanite and the Philistine civilizations. This report is presented by W. J. PHYTHIAN-ADAMS in *Pal. Ex. Fund.*, LV, 1923, pp. 60-84 (3 plates; 5 figs.).

CAPERNAUM.—**Results of the French Excavations.**—The results of the French excavations at Capernaum, Tell Hum, during the years 1905-1921 are gathered up in a sumptuous volume entitled *Capharnaüm et Ses Ruines*, by P. G. ORFALI, Paris, Picard, 1922 (120 pp.; 12 pls.; 130 figs.; fol.) This discusses the history of Capernaum, the history of the excavations, the archaeological analysis of the Synagogue on the basis of the excavations, the archaeological problem of the age of the Synagogue, the emblems and figures in the decoration of the Synagogue and its court, and the Octagon, another building in the vicinity of the Synagogue. The conclusion reached is that the remains permit the practically complete restoration of the original structure of the Synagogue, which is the finest yet discovered in Palestine, and that this Synagogue was probably standing in the time of Christ.

GAZA.—*Report on the Soundings.*—In *Pal. Ex. Fund*, LV, 1923, pp. 11–36, 6 figs., W. J. PHYTHIAN-ADAMS discusses the preliminary excavations that have been made in the mound of ancient Gaza. The site is disappointing, since it is far too large for exploration on a small scale, and since there is no perpendicular cliff on which the stratification can be studied easily. The investigation made thus far seems to show that the city experienced a long period of desertion at the beginning of the Hellenic Age, and that its renaissance began under Roman rule during the first century A.D. He gathers considerable historical evidence to show that Gaza was deserted during the Greek period.

GEZER.—*A Portable Sun-Dial.*—Among the objects discovered by Macalister at Gezer was an ivory half-disk bearing the cartouche of Merenptah of the nineteenth dynasty, and a figure of the king adoring the god Re-Harmachis. This was described by Macalister as a pectoral; but E. J. PILCHER, in *Pal. Ex. Fund*, LV, 1923, pp. 85–88 (4 figs.), shows that it is identical with certain Egyptian portable sun-dials depicted by the late Dr. G. Möller of Leipzig.

JERUSALEM.—*Excavation of a Tumulus.*—In *Bulletin of the American Schools of Oriental Research*, No. 10, April, 1923, pp. 2–3, W. F. ALBRIGHT reports briefly on his excavation of a tumulus at Malhah, two or three miles southwest of Jerusalem. It proved to contain pottery of the early Iron Age, and is conjectured to be a Philistine monument.

Proposed Excavations on the Eastern Hill.—The Government of Palestine has proposed that the eastern hill of Jerusalem be excavated by international coöperation. This is the site of the pre-Israelite fortress of the Jebusites, of Zion, the City of David, of Ophel, of the tombs of the Hebrew kings, and of many other important localities mentioned in the Old Testament. At present the site is outside the walls of modern Jerusalem and is unoccupied, but this state of affairs cannot last long. It is highly desirable that this most ancient and interesting part of the city should be thoroughly explored while there is still opportunity. It is hoped that through the coöperation of learned societies, and through private generosity, sufficient funds can be raised to carry through this great undertaking. In *Pal. Ex. Fund*, LV, 1923, pp. 37–49, E. W. G. MASTERMAN discusses the historical importance of this site.

An Old Hebrew Seal.—In *Pal. Ex. Fund*, LV, 1923, pp. 94–97, E. J. PILCHER reports the discovery at Solomon's Pools of a signet bearing the inscription, "To Hananiah (son of) Neriah." This bears a close resemblance to the seal of Ishmael (son of) Neriah, found by F. J. Bliss on Ophel in 1897. It is possible even that Hananiah and Ishmael were brothers. At least both seals must have come from the hand of the same engraver. As this is inscribed with old Hebrew characters, it must at least be earlier than the introduction of the square Aramaic characters. The name Hananiah is first attested in the post-exilic period.

NAZARETH.—*Discovery of Jewish Tombs.*—In *Pal. Ex. Fund*, LV, 1923, pp. 89–91, (fig.), A. MANSUR reports the discovery at Nazareth of a cave of which the entrance was closed with a rolling stone, and in which there were thirteen old Jewish graves of the *kökim* type. This discovery has an important bearing on the question whether Nazareth was an inhabited site in the time of Christ, a fact which has been doubted by some New Testament critics.

SHILOH.—*The Danish Excavations.*—In *Bulletin of the American Schools*

of *Oriental Research*, No. 9, February, 1923, pp. 10-11, W. F. ALBRIGHT reports briefly on the results of excavations at Khirbet Seilun (ancient Shiloh) by Dr. Aage Schmidt. A number of trial pits were sunk, revealing early Israelite, Seleucid-Roman, and Arab strata. There was no trace of Canaanite occupation; and the lack of Middle Palestinian sherds confirms the Biblical tradition that the site lay in ruins after the battle of Eben-ezer.

TYRE.—Recent Excavations.—In *Syria*, III, 1922, pp. 1-26 (3 pls.; 14 figs.) and pp. 116-133 (4 pls.; 17 figs.), Madame DENYSE LE LASSEUR reports the results of her excavations and archaeological excursions in and about ancient Tyre. A trench made in the west side of the hill called Tell el Ma'chouq brought to light a confused structure of stones, apparently a mediaeval foundation built, in part, of the steps of an ancient stairway, perhaps the approach to a temple. Among the many fragments of pottery discovered the most important was a handle with a Phoenician inscription. In the necropolis of el-Aouatin it was noted that sculptures found by earlier observers had disappeared, perhaps in lime-kilns. The most interesting excavation was at Djel el-Amad, east of Tyre, where a number of tombs were opened. These included one extensive hypogaeum, the central hall of which was ornamented with paintings on the walls and the ceiling. Numerous small antiquities were discovered here. Miscellaneous ancient objects still to be seen in Tyre are described, as well as trips of reconnaissance to numerous neighboring sites. A note is added on the excavations of T. Macridi Bey at Tell el-Ma'chouq in 1903, accompanied by drawings made by Macridi Bey.

ASIA MINOR

CYZICUS.—Statue of Attis from a Metroum (?).—In *B.C.H.* XLV, 1921, pp. 436-470 (4 pls.; 11 figs.), T. MACRIDY BEY and C. PICARD publish a statue of Attis, now in the Imperial Ottoman Museum at Constantinople. This statue was discovered in September, 1917. In May, 1918, Bedri Bey, Inspector of Museums, discovered the capital that crowns the pillar behind the statue, together with a large carved pilaster, and removed all these fragments to Constantinople. A fragment of a column, found *in situ*, and decorated with reliefs of fish was left. The exact point of discovery of the statue cannot be accurately determined, but it is known to have been found in the southern part of the ancient city, south of the so-called "Temple of Hadrian." The fragment of a column, mentioned above, found about 300 m. from the supposed point of discovery, indicates that this area contained a large temple of Cybele, perhaps the principal temple in the city in Roman times, as Cybele is known to have been the patroness of Cyzicus. The statue was apparently set in a niche in the wall of the temple. The form of the work, half statue, half caryatid, seems to have originated in Cyzicus. The statue and temple are dated in the time of Hadrian (117-138 A.D.), who is known to have built temples to Cybele in the neighborhood. It is of the earlier type of representation of Attis, the winged hermaphrodite type. Other statues of Attis from Cyzicus, at Brusa, in the garden of the summer residence of the Russian embassy at Constantinople, and in Copenhagen, are compared, and the conclusion reached that they were all of approximately the same date, and parts of a common architectural scheme. Confusions of the cult of Attis with those of Mithra and Dionysus in this period are commented upon.

LAGINA.—*Inscriptions.*—In *B.C.H.* XLIV, 1920, pp. 70–100, J. HATZFELD publishes, with the permission of J. CHAMONARD, fifty-six inscriptions from the sanctuary of Hecate at Lagina in Caria, first transcribed by the latter in 1891 and 1892. Of these inscriptions sixteen are decrees, eleven are commemorations of priesthoods, six are dedications, four are inscriptions on monuments, and the remainder, fragments of lists of priests and attendants.

SMYRNA.—*Miscellaneous Antiquities.*—In *Jh. Oest. Arch. I.* XXI–XXII, 1922, Beiblatt, cols. 223–260 (13 figs.), O. WALTER reports upon various antiquities seen by him at Smyrna. These include a portion of the ancient city wall; a Roman theatre on the north side of the town, similar to the one at Aspendus; a nude Aphrodite, 0.80 m. high, with right hand fastening sandal of left foot, broken off below the knees; three fragments of relief from the temple of Dionysus at Teos; several grave reliefs; and seven Greek inscriptions. A head-band of gold leaf was said to have come from Sardis. This is decorated with a nude Apollo standing in the centre near a tripod. To the right and left of him stand Victories and beyond them are palmette ornaments. Around the edge of the band runs a small frieze with figures.

GREECE

ARCHAEOLOGY IN GREECE IN 1919–1921.—A summary of the archaeological work of the several national organizations in Greece in the three years following the war, by A. J. B. WACE, is published in *J.H.S.* XLI, 1921, pp. 260–276. The American school, excavating around the hill of the temple of Apollo at Corinth (1920), found settlements of the so-called Thessalian and early Helladic periods, with details important for their chronology. On the mound of Zygyouris in the plain of Cleonae (1921) were found the remains of an early Helladic town. (See *A.J.A.* XXV, 1921, p. 248). Pottery from a neolithic site in Arcadia suggests that the Thessalian or northern culture prevailed throughout Greece at that epoch, and that the early Helladic bronze-users were intruders from Crete or from the islands. Very thorough and successful excavations were made by the British school at Mycenae (1920–1921) in the region of the Lions' Gate and grave circle, at the palace on the acropolis, and in the cemeteries, for the purpose of determining more fully the history of the occupation of the site and its relation to Minoan culture. (See *A.J.A.* XXV, 1921, pp. 87–88; XXXVI, 1922, pp. 100–101; XXVII, 1923, pp. 82–83). Members of the school also continued the study of the cemetery at Rhitsona in Boeotia and examined a site in Macedonia, tentatively identified as Kalindoia, with remains belonging to the period 1100–650 B.C. and ascribed to the Dorians and the Macednoi. The French school made important topographical researches about the sanctuary of Athena Pronoia in Marmaria (Delphi), finding a row of treasuries where the heroön of Phylacus was supposed to be. At Delos they excavated on the south slope of Mount Cynthus, finding remains from the fifth and third centuries B.C., and in the stage-buildings of the theatre and the hippodrome, and identified the Archegesion from vase fragments. Work in and about Philippi in Macedonia revealed a temenos of Egyptian gods, a shrine of Sylvanus, a number of Greek and Latin inscriptions and some prehistoric sites with quantities of pottery. In Asia Minor the sharp division of Notion into a Greek and a Persian half has been established as existing down to 400 B.C. and the proto-

Ionian site of Poyteichides identified. In Crete, on a site on the north coast nine hours east of Candia, middle and late Minoan objects were found. Dr. Noack, for the German school, made studies in the Telesterion at Eleusis which are important for the political as well as the architectural history of the Periclean period. At Tiryns three periods of building are now clearly distinguished, the famous galleries belonging to Late Helladic III. In the Greek Archaeological Service, Dr. Kastriotis has excavated the Odeon of Pericles to the east of the Dionysiac Theatre and found it to be a large rectangular hypostyle hall, its northern part cut into the rock of the Acropolis and the southern part resting on an artificial terrace, while the northwest corner extended into the cavea of the theatre. Both buildings were planned at the same time under Pericles, although the Odeon was finished by Lycurgus and the marble columns, which stood six metres apart and in six rows of six columns each, belong to a restoration by Ariobarzanes of Cappadocia, made after the destruction of Sulla's siege in 86 B.C., and probably replace the original columns of wood. A thick stratum of wood ashes suggests that the final destruction was by fire, and the presence of three large lime kilns explains the disappearance of the marble flooring. Excavations around the Monument of Lysicrates reached the pavement of the Street of Tripods at a depth of three metres and the foundations of two other choragic monuments. Some chamber tombs of the Late Helladic III period at Mycenae and Priphitani yielded vases of the well-known types and an engraved gem with a goddess and two attendants dancing. At Sicyon a stoa, a nymphaeum with water works, and a hypostyle hall, probably the Bouleuterion, were excavated and the foundations of another important building, a temple or stoa, were found. At Kato Achaia, ancient Olenos, the tomb of a wealthy family of the third century B.C. was found, with the gold ornaments of several persons, consisting of crowns of foliage, jewelry, and small sewn-on figures and gold thread from the perished fabric of the garments. Excavations at the monastery of Taxiarches near Coronea yielded many important inscriptions including imperial rescripts of the second century A.D. relating to the Copais dykes. In the shrine of Heracles on Mount Oeta among other objects were found inscriptions from the time of the Aetolian League and earlier as well as from imperial times. At Thebes, on the site of the "House of Cadmus," are strata of the Early and Middle Helladic periods and an earlier palace with frescoes, under the Late Helladic III palace, and in the last were found many vases with inscriptions in the mainland form of Cretan script. In Thessaly, on a site near Pherae dedicated to Zeus Thaulios, were found vase fragments dating from neolithic times to the third century B.C. and two superimposed temples built in the middle of the seventh and early in the fourth century B.C. An interesting mausoleum of the second century A.D. was found at Alyzia, Aetolia; and at Thermus, under the existing stylobate of the temple of Apollo, which is of about 600 B.C., were found remains of a long narrow temple, probably of the "Geometric" age, which are more important than those of the early temple of Artemis Orthia at Sparta. The temple of the Gorgon in Coreyra is now known to have been dedicated to Artemis. In Lesbos a more probable site than Koldewey's was found for the temple of Apollo Napaeus. At Clazomenae, on the mainland, the cemetery from which the painted terra-cotta sarcophagi come was found, the surface of the ground being covered with fragments of vases and sarcophagi. The

graves so far excavated are not later than 500 B.C., but the number of superimposed burials shows a long period of use and will make possible a chronological arrangement of the sarcophagi. Excavation of the ancient city on the island of Hagios Ioannes in the bay uncovered a part of the paved main street with houses and side streets, and in one house of Roman date a fine mosaic of Amphitrite with elaborate borders was found. An early Christian basilica was found in the citadel of Chios and important Byzantine churches were being excavated near Chios, near Ephesus, and in Thebes. In *B.C.H.* XLIV, 1920, pp. 367-415, an account is given of all archaeological work in Greece and Greek lands conducted from November, 1919, to November, 1920.—*Ibid.* XLV, 1921, pp. 487-568 (19 figs.), the usual summary is given of excavations, meetings, additions to museums, and other archaeological activities, in Greece and Greek lands, 1920-1921. The deaths of N. Politis and F. Versakis are noted. Most interesting is a photograph of the Parthenon as it will appear after the restoration of the northern colonnade, undertaken by the Greek Government, has been completed (p. 499, fig. 4).

ARGOS.—Excavations in 1912.—In *B.C.H.* XLIV, 1920, pp. 219-226, W. VOLLGRAFF publishes the results of his sixth campaign at Argos, in May and June, 1912. This campaign was devoted to the study of the temple previously discovered, and the Agora. The temple is now completely uncovered, with its cult statue base *in situ* and perfectly preserved except for the top course of marble. Near this base, fragments of a marble female statue of more than life size were found. The writer considers it probable that this temple is one of those mentioned by Pausanias, perhaps that of Artemis Peitho. It was destroyed by the Goths, and a new building of almost equal size occupied the site in the Byzantine period. From the materials of this later building several interesting inscriptions have come to light. The whole northern colonnade of the Agora has been uncovered. It was elongated in the Roman Imperial period, the stylobate of the elongation being of re-used blocks. The Agora itself seems to date from the middle of the fourth century B.C. Near its southeastern corner a very interesting relief of a woman and girl in adoration of Hermes was discovered. Steps cut into the Larissa hill, south of the extant theatre, were laid bare, revealing the existence of a Roman Odeum, on the site of the more ancient place of assembly. On the north side of the Larissa was found the course of a Roman aqueduct. Its source was discovered in the valley of the Inachus, on the outskirts of the modern village of Epáno-Beseli. On the left bank of the Inachus, a Mycenaean cemetery was discovered on a low hill, twenty-five minutes' distance from the modern Scala in the direction of Schinochori. Not far from the Roman aqueduct, a fine votive relief of the fourth century B.C. was found.

ASINE.—Notes on the Site.—The site of ancient Asine, now called Kastraki, to the southeast of Nauplia, was investigated in May, 1920 by L. RENAUDIN, who reports his results in *B.C.H.* XLV, 1921, pp. 295-308 (5 pls.; 11 figs.). The scientific excavation of this site has since then been undertaken by the Crown Prince of Sweden, to whom the French School ceded its rights to excavate there. The walls appear to go back to Mycenaean times, and have often been rebuilt, as traces of Byzantine and Venetian construction prove, but the ancient plan has been steadily adhered to. Ruins of the massive towers remain, in one case to a height of fifteen courses from the ground, of fine

polygonal masonry. In the centre of the city there appears to have been another tower, or keep, used for defence after the walls had been carried, and of later date than the primitive wall, since it is built of re-used blocks. Gates were found at the southeast and the west of the city. The city itself was built on terraces. Five cisterns of good size show that it had an abundant supply of water. Of the smaller finds, a fragment of a statue, probably of an archaic "Apollo," and sherds of the late Mycenaean and geometric periods, may be noticed.

ATHENS.—The French School at Athens, 1914-1919.—In *B.C.H.* XLIV, 1920, pp. i-xxvi, C. PICARD pays a tribute to those former members of the French School who gave their lives in the Great War: G. Leroux, killed in action, June 9, 1915; J. Paris, missing in action, May 9, 1915, and given up for lost; A. J. Reinach, killed in action, August 30, 1914; C. Avezou, killed in action, November 16, 1915; and G. Blum, killed in action, September 27, 1914. A list of their published works is given; in the case of Reinach, reference is made to a bibliography of his works compiled by his uncle, Salomon Reinach, in *R. Arch.* 1919, pp. 191-197. In addition, a complete list of former members of the School who were in service is given, revealing the death from disease contracted at the front, of C. Bayet, a member of the School in 1873, a veteran of the Franco-Prussian War, and the oldest alumnus of the School in the service of his country. The article is illustrated with portraits of the five killed in action. The present conditions and future hopes of the School are briefly discussed.

A Publication of Mosaics.—The Hellenic Government contemplates the publication of a general work on Greek mosaics under the patronage of the Union Académique Internationale. (M. CAVVADIAS, *C. R. Acad. Insc.* 1922, p. 356.)

CORINTH.—A Herm of Herodes Atticus.—In *B.C.H.* XLIV, 1920, pp. 170-180, A. PHILADELPHUS publishes a herm discovered at Corinth in October, 1919, and now in the Museum at Old Corinth. The head at first was missing, but was later found and placed in position. The herm is much mutilated, but is nevertheless sufficiently preserved to give a good idea of its original appearance. An inscription identifies it as a portrait of Herodes Atticus, who is known to have been a great benefactor of the city. The forms of the letters, and the technique of the modelling show it to be contemporary with the subject. The herm enables us to identify with absolute certainty the bust in the Louvre previously believed to be a portrait of Herodes.

DELOS.—A Sanctuary of Artemis Eileithia.—Excavations at Delos in the autumn of 1920 on the eastern slope of Mt. Cynthus revealed the existence of a small sanctuary, described by R. DEMANGEL in *B.C.H.* XLVI, 1922, pp. 58-93 (4 pls.; 22 figs.). This steep and inhospitable slope was terraced about half way down, and remains of buildings were found there. The principal building of the sanctuary occupied the entire northern end. This was the *naos*, or temple of the deity. It was a single chamber and was entered from the south, as the eastern and northern walls rested on the retaining wall of the terrace, and the western wall bore on the slope of the mountain. The walls of this temple were of granite, revetted with white marble. The floor was paved, and the roof appears to have been of the pent-house form, and covered with large tiles. Opposite the entrance to the temple was apparently the cult

image, of which part of the pedestal is preserved. To the west of the temple was a small annex, possibly intended as the residence of the guardian of the shrine, possibly as a storehouse for the overflow of offerings from the temple. This chamber was roofed with tiles, some of which are stamped, giving an indication that the annex dates from about the second century B.C., and, therefore, putting the date of the temple at a period anterior to this. On the west side of the terrace, at about the centre, between two jutting rocks, were found the remains of a foundation, dated by the cramp-cuttings on the blocks in the fifth century B.C. Deposits of cinders prove that this construction was a part of the altar. In these deposits were found fragments of pottery, lamps, etc., from the period of the red-figured vases down to Graeco-Roman times, but principally of the Hellenistic period. In the temple were found a large number of reliefs, and fragments of reliefs, which permit an identification of the sanctuary. Of these, the best is that of a young couple with their children, a little girl about eight years old, two smaller children, and a boy of about twelve, who is offering a goat to the goddess. The goddess stands at the left of a small round altar; she wears a long chiton and carries a torch in her right hand. This relief is dated by the writer at the end of the fourth century B.C. By a process of elimination, the deity is identified as Artemis. The identification is confirmed by another relief, where the goddess wears a short chiton. A third fragmentary relief bears the fragmentary inscription APT, while cumulative evidence is added by a fourth, where a hind is shown being offered in sacrifice, an animal sacred to Artemis only. The reliefs show Artemis in her capacity as the protectress of women, and especially women in childbirth, or after a safe delivery. Other reliefs and fragments, most of which show processions of worshippers, carrying torches, are discussed, and the article concludes with an account of the absorbing by Artemis of the earlier cult of Eileithyia, a divinity of Cretan origin.

A Bilingual Inscription of 58 B.C.—An inscription in Latin and Greek found at Myconos by the late Ephor of Antiquities, M. D. Stavropoulos, but not published during his lifetime, is now for the first time completely published by EDOUARD CROU in *B.C.H.* XLVI, 1922, pp. 198-215 (pl.). It is carved on a slab of marble, the other side of which also contains an inscription. Although found in the wall of a church in Myconos, it is unquestionably from Delos, and has been placed in the museum there. The forms of the letters are those of the first half of the first century B.C., and the date is fixed by the names of the consuls, which are given, at 58 B.C. Most of the Latin text is preserved, but only the beginning of the Greek. The text is a law, which would be called, from the names of the consuls, *Lex Gabinia Calpurnia*, or *Lex Gabinia et Calpurnia*. The object of the law was to accord to Delos the privilege of exemption from duties, and liberty; to provide for the restoration of temples and sanctuaries that had been sacked by the pirates; and to confirm certain previous decisions of the Senate, providing for the restitution to those Delians who had suffered a diminution of their estates, of what was rightfully theirs. The liberty granted by this law was nominal, since Delos was under the administration of Athens, and also under the authority of the proconsul of Macedonia. To carry out this law, an impartial tribunal was provided for, under one of the quaestors of the proconsul of Macedonia. This part of the inscription is restored on the analogy of a *senatus consultum* of 81 B.C., in favor

of the inhabitants of Stratonicea. Two laws applicable to Roman citizens, analogous to this, are cited, both anterior to the Delian law, and, therefore, establishing the necessary legal precedent.

DELPHI.—Sculptures from the Marmaria.—In *B.C.H.* XLV, 1921, pp. 316-334 (8 figs.), A. PERSSON studies the fragments of sculpture found in the French excavations in the Marmaria in 1901-02. It has been possible, by means of fitting fragments together, to complete several figures. About thirty fragments were found, belonging to reliefs of combats between Greeks and Amazons and Lapiths and Centaurs. They are of the beginning of the fourth century B.C. Homolle assigned them to the Tholos, but M. Persson connects them with the Ionian or Aeolian Treasury. Although agreeing with Homolle, Poulsen and Dinsmoor in placing the origin of this Treasury in the sixth century B.C., he believes that it was rebuilt in the fourth. The sculptures attributed to this Treasury by the above scholars he considers may have been parts of a pedimental group.

PTOION.—Inscriptions.—In *B.C.H.* XLIV, 1920, pp. 227-262 (10 figs.), L. BIZARD renews the account of the excavations of the French School at the Ptoion in 1903. Twelve inscriptions are published, four of which are in the epichoric alphabet. No. 1, a metric inscription on a very archaic Doric capital, shows that the column to which it belonged supported a statue of Apollo, dedicated by one of the Alcmaeonidae, after he had won the chariot race at the Panathenaic games. This inscription is dated by the forms of the letters in the last half of the sixth century B.C., between 554 and 539. No. 2 is a dedication of Hipparchus the Pisistratid, on a column-base, discovered first by Holleaux in 1885, and published with his permission. It is dated at 520-514 B.C. No. 5 is a dedication of a group of statues, the work of the sculptor Tisicrates of Sicyon, who was working in the end of the fourth and beginning of the third century B.C. No. 9 contains parts of two decrees dealing with the Ptoian games, of which part of the second was already known (see *B.C.H.* XIV, 1890, p. 51, No. 13 = *I.G.VII*, 4139). No. 10, completely preserved, is the statement of the accounts of an agonothete, Aeschriondas, son of Polyxenus, dated by the forms of the letters and other data in the first century B.C. This inscription enables the writer to date the prolongation of the retaining wall of the esplanade of the temple area toward the northeast, as the work of this agonothete.

TEGEA.—The Sanctuary of Athena Alea.—In *B.C.H.* XLV, 1921, pp. 335-435 (pl.; 69 figs.), C. DUGAS begins what was originally intended to be the first part of the publication of the excavations carried out on the site of the temple of Athena Alea at Tegea by the French School at Athens since 1900. This article deals with the period antedating the fourth century B.C. No remains of the earlier temple, which is known to have been destroyed by fire in 395-4 B.C., were found, and the theory is advanced that many of the materials of the early temple were reemployed in building the fourth-century edifice. A large number of small objects, ex-votos of the periods from the end of the Mycenaean age through the fifth century, were discovered in the debris of deposits of ashes, etc., from the altar, found in several places in the sacred precinct. The most numerous finds are of small bronze objects, 214 of which are catalogued. These include statuettes of animals, and human figures, miniature vases, handles, loom-weights, pins, fibulae, necklaces, rings, hair

ornaments, spatulae, pincers, a strigil, spear or arrow heads, the tiny crest of a votive helmet, a small votive dagger, miniature bits, wheels, and a series of bronze plaques. About 130 vases and sherds, principally the latter, were found, ranging from the Mycenaean period to the end of the Corinthian, both hand-made and wheel-made. Of these the greater number are of the Geometric age. In addition seventeen terra-cotta figurines, about thirty miscellaneous objects, and a small number of early coins, including a fine silver coin of Corinth, were found. The most important object was a small bronze statuette of Athena, in perfect preservation, and a fine example of archaic workmanship.

ITALY

INSCRIPTIONS.—In *Not. Scav.* XIX, 1922, pp. 489–490, R. PARIBENI publishes three inscriptions found at Caporciano (ager Pelutinatium), Pentima (Corfinium) and Pizzoli, all in the Fourth Region (*Samnium et Sabina*).—*Ibid.* pp. 486–488, M. DELLA CORTE publishes ten inscriptions and fragments from Nocera Inferiore, preserved in the “Castello del Parco.” Some of these were given, not wholly correctly, in Orlando’s *Storia di Nocera dei Pagani*, but have not yet found a place in the *C.I.L.*

AETNA.—Recent Discoveries.—In *Not. Scav.* XIX, 1922, pp. 491–499, G. LIBERTINI reports various discoveries at Casalotto, on the southeastern slope of Mount Aetna, between the villages of Valverde and Aci S. Antonio, including the remains of a building of uncertain use, dating from the early empire, and an inscription, not earlier than the third century, containing in Greek and in Latin a dedication to Priapus, the first as yet found in Sicily. Fragments of a statue of Hercules were found near by, indicating that there was perhaps a shrine to the two gods in the neighborhood. Other discoveries were of later date, including a fibula in the form of a hare, belonging to the seventh or eighth century.

AQUILA.—A Mosaic Pavement.—In *Not. Scav.* XIX, 1922, pp. 187–188, G. B. BRUSIN announces the unearthing of a handsome mosaic pavement, not earlier than the third century A.D. and apparently belonging to a *ludus athleticus*.

BOLOGNA.—The Head of Athena.—In *Z. Bild.* K. LVII, 1922, pp. 102–105 (5 figs.), C. KENNEDY writes of his recent cleaning of the Bologna Athena head, which has so successfully restored the original surface of the marble. Some fine photographs taken after the cleaning show how much better fitted the head now is for study and enjoyment.

A Hellenistic Vase.—In *Faenza*, X, 1922, pp. 52–53 (pl.), P. DUCATI writes on an important vase of the third century B.C., which has hitherto received little notice. It is in the Museo Civico at Bologna and probably came originally from Athens, for it is closely similar to another vase found there. In form it shows the influence of metal work. In decoration it illustrates (if we except the spirited dolphins sketched on the handles) how a degenerate art reverts to primitive designs: in this case geometric patterns are used.

BRESCIA.—Miscellaneous Discoveries.—In *Not. Scav.* XIX, 1922, pp. 191–198, G. PATRONI reports the discovery at Bagnolo Mella of a sculptured marble block, badly damaged, and six fragmentary inscriptions. At Remedello Sopra, in making an irrigation canal, a jar was found containing several copper axe-heads, similar to those found at Pieve Abignola and published in *B. Pal.*

It. 1906, pp. 60 ff., but apparently of an earlier date; also a tomb, in which was a skeleton wearing a pair of Roman slave-fetters.

FLORENCE.—A Neolithic Vase.—The Royal Archaeological Museum at Florence has acquired a neolithic vase, about 20 cm. in height and 18 cm. in diameter, found at Pitigliano. It is of the "bottle" type, but instead of handles it has a projection on each side, which is pierced for passing a cord through it, a rare form, of which there is only one example among the vases illustrated in *B. Pal. It.* 1915, pp. 46 ff. (E. GALLI, *Not. Scav.* XIX, 1922, pp. 204-205.)

FORMELLO.—An Etruscan Tomb.—E. STEFANI reports the discovery in the commune of Formello of an Etruscan tomb of the sixth or seventh century B.C., containing a large number of vases and fragments, mostly of bucchero ware. He also publishes a funerary urn found the year before in the same locality. (*Not. Scav.* XIX, 1922, pp. 215-219.)

GALZIGNANO.—A Boundary Stone.—In *Not. Scav.* XIX, 1922, pp. 189-190, A. ALFONSI and A. CALLEGARI report the discovery of another stone marking the boundary between Ateste and Padua, established by a decree of the senate of 141 B.C. Other similar stones came to light in 1767 (*C.I.L.* V, 2491) and in 1837 (V, 2492).

LANUVIUM.—An Ancient Road.—Near the estate called Montegiove the remains of an ancient road have been found, paved with polygonal blocks of basalt and running north-northeast by south-southwest; also the remains of a tomb and a fragmentary inscription in letters of the first Christian century. Parts of this road, which may have been the Via Antiatina, have come to light at intervals for a distance of a mile and a quarter, probably the part between the twenty-first and twenty-second milestones from Rome. At Borgo S. Giovanni the remains of the ancient road were further uncovered. At Tre Vie and at Casal Pozzo fragmentary inscriptions were found. (A. GALIETI, *Not. Scav.* XIX, 1922, pp. 450-457.)

LIGURIA.—Miscellaneous Discoveries.—In *Not. Scav.* XIX, 1922, pp. 199-203, U. MAZZINI reports the following discoveries and excavations: at Boves, a Roman tomb with a stele ornamented with representations of animals similar to those in *C.I.L.* V, 7856. It has the cognomen *Marcellius*, new in Piedmont, and the gentile name *Viccius* found only in Augusta Bagiennorum (*C.I.L.* V, 7670 and 7721). At Acqui the Roman *piscina*, discovered in 1913, has been almost completely uncovered. It measures 17.50 by 10.50 m. and is coated with *opus signium*, over which there was once a covering of marble slabs. It was entered by three steps extending completely around it. It formed part of a large structure, the exact nature of which could not be determined. At Savona a recent overflow of the brook called Molerino disclosed a Roman *sepulcretum*. The contents of the tombs were scattered and only one brickstamp, *P. M. Scribon.*, was found. At Fezzano remains of Roman buildings with walls parallel to the seacoast were found, probably naval storehouses for the provision of the fleet at Portus Lunae.—*Ibid.* XIX, 1922, pp. 362-378, P. BAROCELLI gives an account of the renewal of the excavations at Serravalle Scrivia, the site of the ancient Libarna, mentioned by Pliny (*N. H.* III, 49) as one of the famous cities of Liguria. It was situated on the Via Postumia at the entrance to the Val di Scrivia (see *Not. Scav.* 1914, p. 113). In the recent excavations numerous buildings of which two plans are given

were wholly or partly uncovered. Among the finds were several mosaic pavements of the time of the Antonines, a small altar with an inscription of Q. Cassius Callistus, and numerous coins, mostly of the second and third centuries. That was the period of the greatest development of Libarna, which was destroyed at an early date.

NAPLES.—A Cemetery.—At the village called Ponticelli, four and a half km. from the Porta Capuana, on the left of the road leading from Naples to Capua, ninety-three tombs have been found, which are published by C. Q. GIGLIOLI with numerous illustrations. Nearly all the tombs were in the form of coffins made of large slabs of tufa, without ornamentation. A great many vases of various forms were found. (*Not. Scav. XIX, 1922, pp. 257-286.*)

NEGRAR DI VALPOLICELLA.—Mosaics.—At Negrar di Valpolicella, on an estate called Le Tre Corteselle, a fine mosaic pavement was found in 1887, from which two of the *emblemata* were taken to the Museo Civico at Verona. The discovery in 1922 of two horses' heads in the same material led to systematic excavations, with the result of unearthing a number of mosaic pavements belonging to a Roman villa. One of these, 70 m. square, had *emblemata* connected with the myth of Pelops and Hippodamia. The mosaics, which date from the end of the second or the beginning of the third century, are important for the history of mosaics, and as showing the existence of magnificent villas in the *pagus Aruanatum* (*C.I.L. V, 1, p. 390*) near Verona. (T. CAMPANILE, *Not. Scav. XIX, 1922, pp. 347-361.*)

POMPEII.—Recent Excavations.—In *Not. Scav. XIX, 1922, pp. 459-485* M. DELLA CORTE continues his account of the excavations on private property at Pompeii (see *Not. Scav. 1921, pp. 415 ff.*) Near Boscotrecase a *villa rustica* has been in part uncovered, containing a large number of utensils and small objects, including the seal of *Ti. Claudius Eutychus*. A part of the villa was decorated in the Third Style with several finely executed landscapes and friezes containing Egyptian motives. Other excavations yielded another *villa rustica* in the territory of Torre Annunziata, about 100 m. north of the last tombs on the Via dei Sepolcri, besides a great number of inscriptions and small objects.

ROME.—The Sculptures in the Vatican Basements.—The principal sculptures discovered by Dr. Amelung in his researches in the basements of the Vatican are enumerated by Mrs. S. A. Strong in *Ant. J. III, 1923, pp. 160-161*. Sculpture of the fifth century B.C. is represented by a head from a metope of the Parthenon, and by replicas of the head of Aristogiton, of the head of the Hermes Propylaeus of Alcámenes, and of the head of Myron's Athena. One head resembles that of the Nike of Paeonius. There are also replicas of the head of the Apollo of the Omphalos and of the relief of the Charites by the sculptor Socrates; and a copy in basalt of the head of the Idolino. A head of Aphrodite, perhaps an original of the fourth century, is of Praxitelean type; a head of a youth is related to the Hermes and the Aberdeen Heracles. There is a replica of the torso of the Capitoline Aphrodite. A number of Hellenistic fragments and Greek and Roman portrait heads have been recovered. These sculptures are to be arranged in a small new museum.

Recent Discoveries.—In *Not. Scav. XIX, 1922, pp. 405-406*, C. G. GIGLIOLI reports the discovery on the Via Flaminia, near the Villa Giulia, of the remains of a columbarium with nine *ollae*, whole or in fragments, one of

which contained a hoard of bronze coins. The columbarium dates from the early empire, the coins from the fifth century A.D. On pp. 406-408 the coins are described by L. CESANO. Among them are 150 pieces of Theodosius II, representing the issues of the five Roman mints. There are fifty coins of Placidus Valentinianus, heretofore miscalled Placidius, 452-455 A.D., and seventeen of Galla Placidia, daughter of Theodosius I. *Ibid.* pp. 408-427 R. PARIBENI announces the discovery of several tombs of the imperial period, near the point where the Via della Magliana joins the Via Portuense, with one hundred inscriptions and sundry small objects. Near the ninth kilometre of the Via Trionfale, half way from Rome to La Storta, G. BENDINELLI (*Ibid.* pp. 428-449) reports the discovery of two sepulchral *hypogaea* with paintings and sculptured sarcophagi. One *hypogaeum* belonged to the gens Octavia, the other was anonymous. The former, which consists of a sepulchral chamber with niches and a vestibule or corridor, has a simple decoration on the walls and ceiling. Above one of the niches is a picture in *tempera* on a white background, representing Hermes Psychopompos conducting the soul of a girl to Elysium. The picture on the opposite wall has fallen; it represented children, or cupids, engaged in various games and sports. The sarcophagi, four in number, are handsomely carved, and the covers also are richly decorated. They date from the third century A.D. The other *hypogaeum*, which consisted of three chambers, is later than the first, belonging to the beginning of the fourth century. It contained two sarcophagi, one of which was of small size. On pp. 219-234 E. GATTI and R. PARIBENI report a number of chance discoveries in various parts of the city: an ancient road near the Eaths of Trajan, running north and south into the *clivus Suburanus*, with a number of inscriptions and fragments; and in the construction of a street from the Vie delle Pisana and di Casetta Mattei to the Via Aurelia Nuova tombs with a brick stamp of 140 A.D. and fragments of vases. Two of the vases are noteworthy because of their singular decoration, suggesting *crepundia* except for their extreme fragility. Two statuettes, caricatures of a negress and of a balancer, were also found.

SARDINIA.—Recent Discoveries.—In *Not. Scav.* XIX, 1922, pp. 287-338, A. TARAMELLI reports a number of interesting discoveries: at Ozieri, near the railway station of Chilivani there was found a large terra-cotta vase in fragments, which, when entire, was apparently about 60 cm. in height. In it had been deposited some eighty bronze implements of the nuraghic period, including axes, hatchets, spearheads, and a small anvil. At Portotorres, in the region known as Balai, a vase was found containing forty coins, of which thirty-seven were gold solidi of Byzantium, ranging in date from 829 to 870 A.D., and three were Arabic coins of the year 874. The vase also contained some gold ornaments in fragments. At Serri further excavations were made in the nuraghic sanctuary near the church of S. Maria della Vittoria on the plateau of Giara, resulting in the complete uncovering of the sanctuary and its surroundings, of which a plan is given, and the discovery of a large number of vases, votive offerings, and statuettes. At S. Antiocho a *hypogaeum* for the burial of Jews was found not far from the one containing the inscription of Berenice (*Not. Scav.* 1908, p. 150). It contained nine graves, of which six were in pairs in the walls, while the others, one of which was for a child, were in the floor. One of the former, the only one which was unopened, had an

inscription, in Hebrew and cursive Latin, painted in red on its front, together with a tree and what seemed to be the Jewish *candelabrum*. The Hebrew was written from left to right, instead of from right to left. No objects were found by which the date could be determined.

TERMINI IMERESE.—**Two Roman Heads.**—In *Dedalo*, III, 1923, pp. 475-481 (4 figs.), E. GABRICI publishes two heads found in Sicily, one now in the Communal Museum at Termini Imerese, the other in the National Museum at Palermo. Neither can be identified as to the subject represented, but the female head shows a likeness to the portraits of Livia and dates from the second half of the first century A.D. The male head is a fine example of the masterly portraiture of the second century A.D.

TIVOLI.—In *Not. Scav.* XIX, 1922, pp. 234-246, R. PARIBENI gives an account of recent excavations and restorations in the villa of Hadrian. The principal aim was to connect the various isolated groups of structures, and the result is several additions to the plan published in *Not. Scav.* 1906. The group of buildings at the southeast corner of the Poicile has been sufficiently explored to show that it is not a "heiliger Bezirk" as Wimmefeld with some hesitation termed it. In it several fragments of beautiful and novel capitals were found, the design of which has been restored by Gatti. The rooms were paved with colored marbles of various kinds. In the course of the digging some fragmentary sculptures were found. The group of buildings east of the Poicile seems to be a bath of an elaborate kind, having in addition to the usual rooms several of uncertain purpose. One of these Paribeni believes to be a *heliocamius* (cf. Pliny, *Epist.* II, 17 and Ulpian, *Dig.* VIII, 2, 17). Here, too, sculptures were found: fragments of a fine replica of the "crouching Venus," attributed to Doidalses of Bithynia; a bearded head, greater than life size, perhaps a barbarian; a portrait head of a young girl, which, from the arrangement of the hair and other details, seems to belong to the end of the second or the beginning of the third century; and a small female head of mediocre workmanship, wearing a helmet, perhaps an Amazon, or a personification of some kind.

TRANSPADANA.—**Inscriptions.**—In *Not. Scav.* XIX, 1922, pp. 198-199, P. BAROCELLI reports the discovery at Biella of three fragmentary Latin inscriptions, which were taken to the museum at Torino. One mentions a *Largius*, a gentile name previously unknown in that locality.

VEII.—**Recent Excavations.**—In *Not. Scav.* XIX, 1922, pp. 379-404, E. STEFANI gives an account of the excavations at Veii, which were renewed in 1917. At Macchia Grande the remains of Etruscan houses were found, facing an ancient road and containing articles indicating the eighth and seventh centuries B.C. In the same locality six inscribed altars were found. Dedications on four of these read Apoline, Minervia, Victorie, and Dis Deabus; the inscriptions on the other two could not be made out. Fragments of votive offerings indicated the presence of a sanctuary in the neighborhood. The constructions which were unearthed belong to the third and second century B.C., but the sanctuary may have been considerably earlier. On the Piazza d'Armi, just west of the present entrance, a gate was found, connecting the acropolis with the city, and a fine piece of wall, 35 m. in extent, with bastions on the inner side. Not far from the subterranean elliptical structure described in *Not. Scav.* 1913, pp. 167 ff., there were found the remains of a rectangular building, made of square blocks of tufa. It seems to be of late date and its

purpose cannot be determined. Under the Etruscan strata Italic dwellings were found of a round or slightly elliptical plan, belonging to a period between the age of bronze and the age of iron.—*Ibid.* XIX, 1922, pp. 206-215, G. Q. GIGLIOLI publishes several archaic antefixes from the temple of Apollo, evidently the work of the same school of art that produced the fine terra-cotta statue of Apollo.

VELLETRI.—Recent Discoveries.—In the district called Metabo, near the railway station, a small *cippus* was found, ornamented with the bust of a woman and having a sepulchral inscription in well-formed letters. (O. NARDINI, *Not. Scav.* XIX, 1922, pp. 457-458.) At Colle Cascone, about 3 km. to the eastward of Velletri, fragments of a statue of a boy mounted upon a dolphin came to light; the statue is 45 cm. in height and served as the ornament of a fountain. The boy has two small wings on his shoulders and carries a lyre. Other fragments of sculpture and a tomb were found on the line of hills extending from S. Cesareo, the site of a villa of Augustus, to Colle Ottone, where Otho had a country-seat. In the neighborhood of the railway station of Velletri a tomb was found, with a terra-cotta sarcophagus and various small objects; and in the district known as Solluna, one entire and four fragmentary inscriptions, two of which were Christian. One of the latter was dedicated to a *Fallonia*, doubtless a freedwoman of the well-known Christian poetess of the fourth century. (O. NARDINI, *Not. Scav.* XIX, 1922, pp. 247-251.)

VEROLI.—A Calendar.—J. CARCOPINO reports the substance of a communication by G. MANCINI to the Pontifical Academy of Archaeology, describing an important fragment of a calendar discovered in 1922 at Veroli (ancient Verulae). It is to be dated in the interval between the two calendars of Anzio, at some point in the period 14-41 A.D. It confirms the dates (already known) of the dedication of the temple of Concord in Rome, of the surrender of Alexandria to Julius Caesar, and of the death of Gaius Caesar, son of Julia and Agrippa. It gives the hitherto unknown facts that the birthday of Antony, January 14, was a *dies vitiosus*, and that Octavius and Livia were married on June 17. (*C. R. Acad. Insc.* 1923, pp. 64-71.)

An Honorary Monument.—In the course of building operations at Veroli the base of an honorary monument was uncovered and the remains of a monumental structure. This had an inscription to *C. Paquius, IIIIvir*, an office belonging to the first century B.C., but later, when the city became a Roman colony, displaced by *IIViri*. A fragmentary inscription in the public library of Veroli gives the career of a member of the equestrian order of the third century A.D., a subordinator of the banks of the Tiber. (G. MANCINI, *Not. Scav.* XIX, 1922, pp. 252-256.)

SPAIN

MÉRIDA and CACERES.—Roman Remains.—In *B. Soc. Esp.* XXX, 1922, pp. 33-47 (3 pls.), J. R. MÉLIDA describes an expedition to Mérida and Caceres in 1905. Among the Roman remains seen at Mérida were important parts of a theatre and various temples. At Caceres the Roman vestiges had been largely modified by the buildings of the Arab occupation.

FRANCE

LESPUGUE (HAUTE-GARONNE).—An Ivory Statuette.—In *C. R. Acad. Insc.* 1923, pp. 10-12, the Comte de SAINT-PÉRIER describes an ivory statuette

which he discovered in a cave at Lespugue (Haute-Garonne). It represents a statopygous female form, comparable with the palaeolithic statuettes of Brassempouy, Grimaldi, and Willendorf. The partial separation of the arms from the trunk shows comparative technical facility in the maker of the figurine.

PARIS.—An Egyptian Dog.—In *Gaz. B.-A.* VII, 1923, pp. 129-136 (pl.; 3 figs.), G. BÉNÉDITE publishes a unique life-size statue of a dog which has been acquired by the Louvre. The statue is in white limestone, remarkably well preserved. It comes from Siut, near the ancient Lycopolis. The most noticeable peculiarity of the figure is its mixture of convention and realism. Details of the head are treated quite schematically; the body could hardly be more realistic. This mixture is to be accounted for by the assumption that the statue was a funerary monument.

SWITZERLAND

GENEVA.—A Fragment of a Greek Pediment.—In *R. Ét. Anc.* XXV, 1923, pp. 113-117 (pl.), W. DEONNA describes a fragmentary relief which was discovered at Naples, near the Via Sant' Eligio, in 1909, and is now in a private collection near Geneva. Its shape shows that it belonged to the right hand side of a pediment. On it appear the considerably mutilated figures of a mounted Amazon and of two Greeks, one overthrown, but still resisting, the other attacking the Amazon from behind. The condition of the relief makes it difficult to determine its date; but the resemblance of its motives to those of the Bassae frieze and the Nike temple sculptures suggest that it was made late in the fifth or early in the fourth century B.C.

GERMANY AND AUSTRIA

RHENISH ARCHAEOLOGY.—In *R. Ét. Anc.* XXV, 1923, pp. 61-67 (fig.); pp. 255-256, A. GRENIER reports briefly on a number of recent German publications relating to the archaeology, prehistoric, classical, and mediaeval, of the Rhine provinces.

BERLIN.—A Statuette of Isis.—In *Ber. Kunsts.* XLIV, 1923, pp. 1-5 (6 figs.), A. SCHARFF describes a bronze statuette of Isis recently acquired by the Egyptian department of the Berlin museums. It is a seated figure, originally represented as holding the infant Horus. The modelling of the features gives it unusual distinction. The statuette is to be dated in the early Ptolemaic period. Attention is also called to a copper statuette of the Middle Kingdom also in the Berlin collection, showing the goddess seated on the ground with the child Horus in her arms.

GROB-WEIKERSDORF.—A Palaeolithic Station.—J. BAYER reports the existence at Grob-Weikersdorf of prehistoric remains which on geological, archaeological, and palaeontological grounds are determined to belong to the late Aurignacian or early Solutrean epoch. (*Mitt. Anth. Ges.* LII, 1922, pp. 270-274.)

SALZBURG.—A Prehistoric Settlement.—On a height called Burgstall, near St. Georgen in Salzburg, MARTIN HELL has excavated the remains of a series of prehistoric settlements. The site was most fully occupied during the early Bronze Age, but remains of the Hallstatt and La Tène periods were also found. (*Mitt. Anth. Ges.* LII, 1922, pp. 262-269; 4 figs.)

ZWENTENDORF.—Two Cemeteries of the Bronze Age.—In *Mitt. Anth. Ges.* LII, pp. 275-278, 1922, J. BAYER calls attention to two cemeteries of the late Bronze Age near Zwentendorf on the Danube. The sites have not yet been thoroughly examined.

POLAND

RECENT ARCHAEOLOGICAL STUDIES.—In *Archiwum Nauk Antropologicznych*, I, 2, pp. 1-17 (5 pls.; 10 figs.), K. STOLYHWO reports on his investigation of a number of prehistoric sites in the vicinity of Cracow and of Warsaw, and publishes illustrations of the ceramic and bronze fragments discovered.

CRACOW-WIELUŃ.—Excavation of Caves.—In *Archiwum Nauk Antropologicznych*, I, 1, pp. 1-8 (2 pls.; 4 figs.), K. STOLYHWO reports the excavation of a number of caves in the mountain chain of Cracow-Wieluń. At Złoty Potok one showed pottery with cord ornament and flint instruments, characteristic of the decline of neolithic culture in Poland. Another showed slight traces of neolithic civilization. The cave at Dupice yielded numerous examples of late Acheullian industry.

IWANONOWICE.—A Necropolis of the Bronze Age.—A necropolis of the third period of the Bronze Age, discovered at Iwanonowice in the district Miechów, is described by L. KOZŁOWSKI. (*Wiadomości Archeologiczne*, V, 1920, pp. 43-55 (15 figs.).)

LAZY.—A Prehistoric Site.—In *Archiwum Nauk Antropologicznych*, I, 4, pp. 1-6 (pl.; 4 figs.), K. STOLYHWO describes the excavation of a cave at Lazy. One stratum belongs to the end of the neolithic period. The pottery in the front part of the cave and in some of its recesses shows the influence of Slavic and Lusician pottery.

LUZKI.—A Primitive Statue.—In *Archiwum Nauk Antropologicznych*, II, 1, pp. 1-6 (2 figs.), K. STOLYHWO describes a primitive statue of granite discovered by him at Luzki. It belongs to the type known as sculptured menhirs. Morphologically it is related to the menhir statues of southwestern Europe.

PIOTRKÓW.—Prehistoric Collections.—In *Wiadomości Archeologiczne*, V, 1920, pp. 56-64 (8 figs.), R. JAKIMOWICZ catalogues the prehistoric antiquities in the Museum of the Polskie Towarzystwo Krajoznawcze at Piotrków.

ŚNIADKÓW GÓRNY.—Incineration Graves.—In *Wiadomości Archeologiczne*, VII, 1922, pp. 98-106 (12 figs.), I. SĄWICKA reports the discovery at Śniadków Górny of three graves in which incinerated human remains were contained in clay urns and covered by large clay pots turned bottom upwards. In the centre of the triangle formed by the three graves was found a delicately ornamented vase. The furniture of the graves associates them with the LaTène period.

STOPNICA.—Prehistoric Pottery.—In *Wiadomości Archeologiczne*, V, 1920, pp. 40-42 (3 figs.), E. MAJEWSKI publishes notices of neolithic and LaTène pottery found in the district Stopnica.

ZYDÓW.—Prehistoric Bronzes.—In *Wiadomości Archeologiczne*, VII, 1922, pp. 78-91 (2 pls.), J. ŻUKOWSKI describes a deposit of prehistoric objects found in a clay jar at Zydów in 1918. It includes open and closed bracelets, spiral arm bands and buttons of bronze, and glass and shell beads. The find belongs to the advanced period of the middle age of bronze in Poland (Period III of Montelius).

SWEDEN

GRAVSJÖ.—A Cult Stone.—A great block of gneiss, on two opposite sides of which are crosses engraved in circles, once marked at Gravsjö the boundary between Sweden and Denmark. Travellers used to throw small stones on it, a survival of a primitive cult. A tradition regarding the stone is probably derived from a practice of human sacrifice. It is the first known evidence for a stone cult in the Germanic population of Sweden. (B. SALIN, *Fornvännen*, XVI, 1921, pp. 195-210; 4 figs.)

GREAT BRITAIN AND IRELAND

HOARDS OF NEOLITHIC CELTS.—Several British hoards of neolithic celts are reported by R. A. SMITH (*Archaeologia*, LXXI, 1920-21, pp. 113-124; 2 pls.; 4 figs.). He discusses them in the light of Scandinavian evidence on the chronology of these objects.

HOARDS OF THE BRONZE AGE.—In *Archaeologia*, LXXI, 1920-21, pp. 133-140 (4 pls.; 4 figs.), R. E. M. WHEELER and G. S. CRAWFORD describe hoards of the Bronze Age, found at Lynfawr and Langrove in Wales, at Brading on the Isle of Wight, in the St. Catherine valley near Bath, at Portsmouth, at Billericay in Essex, and at Rodborough, Gloucestershire.

ABERGELE.—The Hill Fort at Dinorben.—Excavations at Dinorben during four summers have revealed the occupation of the site by a native population in the third and fourth centuries and have brought to light the remains of four successive hill forts. In 1922 the remains of the earliest fort were reached, but there is as yet no decisive evidence of its date. In the interior of the fort numerous relics of its later occupation were found, including native hand-made pots as well as Romano-British ware. (*Ant. J.* III, 1923, pp. 72-73.)

AYRSHIRE.—The Dagon Stone.—It is reported in *Ant. J.* III, 1923, pp. 66-67, that a menhir of black basalt at Darvel in Ayrshire, popularly known as the Dagon stone, is described by LUDOVIC MANN in the *Glasgow Herald* of October 14, 1922.

BUCKINGHAMSHIRE.—A Romano-British Homestead.—The excavation of a considerable homestead of Roman date in the Hambleden valley, Buckinghamshire, is fully reported in *Archaeologia*, LXXI, 1920-21, pp. 141-198 (5 pls.; 31 figs.). The remains of the buildings are described by A. H. COCKS (pp. 141-157). They comprise the east side and parts of the north and south sides of an enclosing wall of flint, with a gate in the east wall; a house of which the ground plan has a general resemblance to a block-letter capital E, with two corridors, and thirteen other rooms; and three subsidiary farm buildings, equipped with various types of hypocausts. There are also a number of furnaces separated from these buildings. W. GOWLAND, who contributes a note on the furnaces (p. 158), concludes that they were intended to heat drying-floors for grain. Sir ARTHUR KEITH discusses the human remains (pp. 159-163) and Mr. COCKS the animal remains (pp. 163-166). The fragments of terrassillata are catalogued and described in detail by THOMAS MAY (pp. 166-188); numerous drawings of profiles of vases, and lists of potters' stamps accompany this article. The coins, ranging in date from Claudius to Arcadius, are briefly described by MILL STEPHENSON (pp. 189-190); the brooches by R. A. SMITH (pp. 190-194); and miscellaneous small antiquities by A. H. COCKS (pp. 194-198).

Discoveries at Newport Pagnell.—F. W. BULL reports that in deepening a pond at Newport Pagnell, Buckinghamshire, a considerable number of bones and fragments of pre-Roman and Roman pottery were recently found. Fragments of two wooden stakes recovered from the bottom of the pond suggest that there was a pit-dwelling here. (*Ant. J.* III, 1923, p. 153.)

A Roman Burial.—In relaying a carriage drive at Radnage, Buckinghamshire, antiquities indicating a Roman burial were recently discovered. They include a clay pitcher of first or second-century Roman type, a glass bowl of blue and white mottled pattern, remains of an oaken box and of its metal bands and ornaments, and nine bowls and plates of red glazed ware. (*Ant. J.* III, 1923, pp. 152-153.)

CAMBRIDGESHIRE.—An Early Iron Age Settlement.—A site of the early Iron Age has been excavated by Dr. Cyril Fox at Foxton in Cambridgeshire, and has yielded La Tène pottery, iron knives, and broken bones of animals. (*Ant. J.* III, 1923, p. 65.)

The Fleam Dyke.—CYRIL FOX reports the continuation of his excavation of Fleam Dyke in Cambridgeshire. The Dyke has proved to be wholly of Roman or post-Roman construction. (*Ant. J.* III, 1923, pp. 64-65; cf. *Ibid.* II, 1922, p. 58, *A.J.A.* XXVI, 1922, p. 367.)

The Cole Ambrose Collection.—A collection of Cambridgeshire antiquities, made by Mr. Cole Ambrose of Ely, and including a fine series of bronze implements, has been acquired for the Museum of Archaeology and Ethnology in Cambridge. (*Ant. J.* III, 1923, p. 65.)

CARDIFF.—A Prehistoric Beaker.—In *Ant. J.* III, 1923, pp. 21-22 (fig.), R. E. M. WHEELER describes a pottery beaker of Lord Abercromby's C class, found some years ago in a stone cist with a human skull at Gillygaer, and now in the National Museum of Wales. The skull is of some anthropological interest, since it shows patches of inflammatory bone which can be due only to rickets, and is, therefore, the oldest evidence of the existence of this disease.

A Fortified House.—A Roman building has been discovered on the race course at Ely, near Cardiff. It consists of two blocks, to one of which is attached a small set of baths. About 300 A.D. the main building was surrounded by banks and ditches for the protection of the house. (*Ant. J.* III, 1923, p. 69.)

CARNARVON.—The Roman Fort.—Excavation at the Roman fort of Carnarvon (Segontium) has been continued. Five structural phases have been distinguished, extending from the first century to post-Roman times. (*Ant. J.* III, 1923, p. 74.)

CARNARVONSHIRE.—Excavations at Rhostryfan.—Three sites at Rhostryfan have been examined: (1) a ruined house with a cobbled floor on the hill of Bryn-beddau; (2) a quadrilateral enclosure enclosing the remains of two forges; (3) four hut-circles within a common enclosure, with another forge. (*Ant. J.* III, 1923, pp. 73-74.)

DORSET.—Flint Celts.—In *Ant. J.* III, 1923, pp. 139-142 (2 figs.), H. G. O. KENDALL describes two flint celts which were found at Tolland Royal, Dorset.

DUBLIN.—Irish Bronze Age Finds.—In *Ant. J.* III, 1923, p. 138 (2 pls.), E. C. R. ARMSTRONG describes briefly two collections of Irish antiquities of the Bronze Age now in the Royal Irish Academy. The first, which was found

recently in County Westmeath, contains a celt and a number of bronze rings. The other, found some years ago at Scotstown, County Monaghan, contains two simple gold ornaments and some bronze rings.

ESSEX.—Iron Age Pottery.—In *Ant. J.* III, 1923, p. 148, G. M. BENTON calls attention to the discovery of pre-Claudian pottery at Braintree in Essex.

HEREFORDSHIRE.—Ancient Ariconium.—G. H. JACK reports that excavations have been begun on the probable site of ancient Ariconium, at Weston-under-Penyard in Herefordshire. A considerable building with walls of red sandstone has been uncovered. Near it was a smaller building containing a furnace, proving the existence of a smelting industry. Numerous small antiquities were found, including Samian ware of the first century and coins ranging in date from Domitian to Constantine. (*Ant. J.* III, 1923, pp. 68–69.)

LONDON.—Recent Excavations.—Some excavations which throw light on the history of Roman London are described by FRANK LAMBERT in *Archaeologia*, LXXI, 1920–21, pp. 55–110 (27 figs.). (1) Excavations in King William Street show traces of an extensive fire which took place early in the period of Roman occupation, and some remains of Roman houses and walls. Of special interest are parts of a wooden wall or embankment. Pottery in this region belongs to the first century. (2) A fragment of the Roman Wall, found at 122 London Wall, showed a rough and hasty repair of the fortification. (3) Excavation at Finsbury Circus has yielded evidence of the condition of Moorfields in ancient times, which is supplemented by a study of the documentary evidence on its condition in the sixteenth and seventeenth centuries.

An Ancient Bath.—Rev. W. Beckford, Rector of St. Clement Danes, has acquired possession of the Roman plunge bath in Strand Lane (*Ant. J.* III, 1923, p. 62). The bath is described and illustrated in *The Sphere*, Nov. 11, 1922, pp. 140–141, and supplement, p. vi.

The Roman Wall.—In excavation of the site of the Castle and Falcon Inn, Aldersgate, a piece of the Roman wall about eighty yards long was uncovered and destroyed. (*Ant. J.* III, 1923, pp. 67–68.)

Flints from Mesopotamia.—The Anglo-Persian Oil Company has presented to the British Museum a collection of flint cores and flakes from Makertou in Persia. It is a point of interest that they are very similar to flints found in the Rohri Hills near Sakka on the lower Indus, 1400 miles from this part of Persia. (*Ant. J.* III, 1923, p. 64.)

An Attic Red-Figured Cup.—In *Burl. Mag.* XLI, 1922, pp. 121–122 (pl.), J. D. BEAZLEY publishes a Greek cup in the possession of Mr. Guglielmo De Ferrari which is a fragmentary, but otherwise good example of the work of the Panaetius painter. In its close similarities to works by Euphronius, this cup links the style of the Panaetius painter with that of his master.

A Collection of Russian and Siberian Antiquities.—A collection of antiquities from northeastern Russia and Siberia, made by Baron de Baye, has been acquired by the British Museum. In *Ant. J.* III, 1923, pp. 52–60 (pl.; 4 figs.), E. H. MINNS describes the collection, which consists in great part of bronzes, and points out that it illustrates the radiation of Scythian influence to the north and east. He gives a bibliography of the archaeology of northern Russia and Siberia.

MITCHAM.—An Anglo-Saxon Bowl.—R. GARRAWAY RICE reports that he has an Anglo-Saxon bronze bowl, found near Mitcham Church about 1866.

It has a turned-over rim ornamented with bosses. (*Ant. J.* III, 1923, pp. 70-71; fig.)

NORFOLK.—An Early Palaeolith.—In *Ant. J.* III, 1923, pp. 135-137 (fig.), J. R. MOIR reports the discovery of a palaeolithic stone in the glacial till at Sidestrand on the coast of Norfolk. It proves "that the manufacture of Early Chellean hand-axes was begun in what is now East Anglia before the arrival of the glaciers responsible for the deposition of our Lower Glacial beds."

PENMAENMAWR.—Excavations at Braich y Dinas.—In 1922 thirty-five huts between the outer and second enclosing walls at Braich y Dinas were excavated. Coins of Nerva, Trajan, and Hadrian were found, pottery dating from the late first to the fourth century, and other small objects. (*Ant. J.* III, 1923, p. 73.)

RICHBOROUGH.—A Roman House.—In the autumn of 1922 remains of a Roman house were excavated at Richborough. Flint walls stood in some places to a height of four feet. Many small objects were found, including about 500 coins which belong to the last period of Roman occupation, examples of decorated red glazed ware, and a part of a pig of lead inscribed with the name of Nerva. (*Ant. J.* III, 1923, p. 62.)

SOMERSET.—Discoveries at Ham Hill.—R. H. WALTER reports the discovery at Ham Hill, Somerset, of a cremation pit burial of La Tène II period. With it were found an iron dagger in a bronze sheath, an iron adze-head, a bronze buckle, and other small objects of metal, as well as fragments of late Celtic pottery. On an adjacent site some interesting Roman coins and clay sling-bullets, dating from the early Roman occupation, were discovered. (*Ant. J.* III, 1923, pp. 149-150; fig.)

A Roman Villa at Keynsham.—In *Ant. J.* III, 1923, pp. 150-151, A. BULLEID reports the continuation of the study of Roman remains in the cemetery at Keynsham, near Bath. Excavation has brought to light a corridor ten feet wide and two hundred feet long, running east and west. To the north of this is a series of living rooms. At the west end are the foundations of two rooms: one probably of pentagonal shape; the other with an apsidal end. Architectural fragments and small antiquities, including coins of the late third and early fourth centuries, were found.

STONEHENGE.—Recent Excavations.—In *Ant. J.* III, 1923, pp. 15-19 (2 pls.), Lieut.-Col. W. HAWLEY reports on the continuation of his excavations at Stonehenge. He has continued the investigation of the ditch outside the circular earthwork and has cut from it a trench through the rampart, in order to make certain that the solid chalk level was worked over. Few objects of interest were found. Calcined human bones were discovered in some of the Aubrey Holes.

SUSSEX.—Pit-dwellings.—In *Ant. J.* III, 1923, p. 143, it is reported that fifteen pit-dwellings have recently been excavated on the Downs at Park Brow near Cissbury in Sussex. The remains suggest a connection with La Tène or Hallstatt occupation.

WESTMORELAND.—Hardknot Castle and the Tenth Antonine Itinerary.—In *Archaeologia*, LXXI, 1920-21, pp. 1-16 (pl.; 7 figs.), R. G. COLLINGWOOD draws a number of historical inferences from a study of the Roman fort in Westmoreland known as Hardknot Castle. Beginning with a criticism of several theories of the identification of stations on the Tenth Iter in the British

part of the Antonine road-book, he accepts with some modification the theory of Haverfeld (*Archaeological Journal*, LXXII, 1915). A difficulty of this theory is that Hardknot Castle lies on the route thus outlined, but is not mentioned in the itinerary. A new examination of the site and of the abundant ceramic remains, especially the coarse pottery, has led Mr. Collingwood to the conclusion that this fort, established by Agricola, was maintained until about the time of Hadrian's visit to Britain. After 120 the fort at Ambleside was improved, and Hardknot was abandoned. This accounts for the fact that it has no place in the Antonine list.

YORKSHIRE.—A Roman Cemetery.—Three Roman graves belonging to the cemetery of the Roman fort at Slack in Yorkshire were found in 1921. They lie just north of the pre-Hadrianic road from York to Chester. (*Ant. J.* III, 1923, pp. 151-152.)

NORTHERN AFRICA

BULLA REGIA.—Recent Discoveries.—In *C. R. Acad. Insc.* 1922, pp. 326-333, L. CARTON reports more fully on the excavations at Bulla Regia which are briefly described *Ibid.* 1922, pp. 172-175 (see *A.J.A.* XXVII, 1923, p. 106). The two imposing basements abutting on a street which meets the street of the *Thermae* consist of a moulded plinth and an ashlar wall divided into panels and decorated with stucco reliefs representing leaves, fruit, etc. These bases seem to have supported peripteral temples, of which the fronts faced on the southwest an open space which was probably the forum. The façade of the baths has been cleared. On the pavement of the portico are several drawings, perhaps intended as *tabulae lusoriae*.

CARTHAGE.—An Ex-voto.—The Abbé CHABOT describes a gold plaque which was discovered at Carthage and is now in the Musée Aloui. It is decorated in relief with a rosette of eight petals, a dove with a twig in its beak, and a right forearm with open hand. These symbols are often found on Carthaginian stelae. The plaque is also, no doubt, a votive offering. (*C. R. Acad. Insc.* 1922, pp. 354-355.)

REBIBA.—An Inscription.—L. CARTON reports the discovery near Rebiba of an inscription of 105 A.D. marking the boundary between the territory of the Musulamii and the domain of Valeria Atticilla. (*C. R. Acad. Insc.* 1923, pp. 71-73.)

THUBURBO MAJUS.—An Inscription.—L. POINSSOT and R. LANTIER report the discovery at Thuburbo Majus of a marble slab recording the dedication of a chapel to Venus. Its importance lies in the fact that the dedicators are designated as *promagistri* representing the society of the *III publici* of Africa. (*C. R. Acad. Insc.* 1922, pp. 353-354.)

UNITED STATES

CHICAGO.—A Portrait Head.—In *Bulletin of the Art Institute of Chicago*, XVII, 1923, p. 28 (fig.), M. C. reports that the Art Institute has purchased a Greek marble portrait head of about 300 B.C., found in Macedonia. The subject is a bearded man, perhaps a philosopher. The head has the idealism characteristic of Greek portraits.

Stucco Reliefs.—In *Bulletin of the Art Institute of Chicago*, XVII, 1923, pp. 15-16, M. B. W. reports that the Art Institute has received as a gift two

fragments of stucco relief brought from Rome many years ago by G. P. A. Healy, the portrait painter. On one a seated woman and a winged beast are represented; on the other a winged maiden with two deer. They are said to have been found on the site of the Domus Aurea of Nero.

A Chinese Bronze.—In *Bulletin of the Art Institute of Chicago*, XVI, 1922, pp. 42–43 (3 figs.), J. A. MACLEAN describes a Chinese bronze *fu* or altar vessel of the Chou dynasty (1122–255 B.C.) recently acquired by the Art Institute. It is of oblong shape. The vessel and its cover are practically identical in form. The whole surface is covered with an incised geometric pattern. On the ends of the vessel and its cover are conventionalized animals' heads which serve as handles. It is actually less heavy than most Chou bronzes; but clever technical devices are employed to increase its apparent solidity.

NEW YORK.—A Bronze Torso.—An exceptionally interesting recent accession of the Metropolitan Museum is a Greek bronze torso of a male figure, dated in the early Transitional period. The whole right shoulder and a part of the right side are lost, but the fragment preserves much of the modelling which associates it in date and style with the figure of Harmodius and with the Acropolis youth No. 698. (G. M. A. RICHTER, *B. Metr. Mus.* XVIII, 1923, pp. 32–33; 3 figs.)

Classical Bronzes.—Some thirty small bronzes of classical date were acquired by the Metropolitan Museum during the past year. They include (1) a curious mirror-handle in the form of a youth from whose shoulders spring the foreparts of horses and above whose head is the upper part of a female figure, her hands laid on the horses' heads (published, Reinach, *Répertoire de Sculpture*, III, p. 25, 8); (2) a horseman of late archaic date, wearing a cuirass and a helmet with an enormous crest; (3) a striding Zeus of archaic style, who probably once held a thunderbolt; (4) a group of a man and woman walking, from an Etruscan candelabrum; (5) a seated Hermes of fourth-century type; (6) a votive bull with an inscription to the Cabiri; (7) a head of a griffin in heavy cast bronze, the ornament of a caldron or a chariot pole, of the seventh or sixth century; (8) a geometric statue of a horse, the neck and legs worked in sheets of metal without the third dimension; (9) an Etruscan mirror with a design of a nymph and satyr. (G. M. A. RICHTER, *B. Metr. Mus.* XVIII, 1923, pp. 72–76, 7 figs.)

A Bronze Statuette of a Horse.—Among the many valuable recent accessions to the collection of Greek bronzes in the Metropolitan Museum, the most remarkable is the figure of a horse, cast in solid bronze, 42 cm. high (Fig. 2). It is less archaic than the marble horses of the Acropolis Museum, and less naturalistic than the horses of the Olympia pediments. This fact, and a comparison of the figure with the horses on Syracusan coins of Transitional style lead Miss G. M. A. RICHTER, who discusses the work in *B. Metr. Mus.* XVIII, 1923, pp. 89–93 (6 figs.) to date it about 470 B.C. It combines abstraction and simplification of forms with animation in a way which is characteristic of the great achievements of Greek art. It is natural to think of Calamis in connection with a figure of this quality and date; and it is fair to conjecture that the horses of the group to which the Delphi Charioteer belonged were similarly conceived and executed.

Objects of Classical Art.—In *B. Metr. Mus.* XVIII, 1923, pp. 124–127 (7 figs.), Miss G. M. A. RICHTER describes miscellaneous objects of Greek and Roman art recently acquired by the Metropolitan Museum. The

most important is a silver phiale of the fifth or the fourth century B.C., decorated with lanceolate leaves in relief, radiating from the base of the bowl (published, *Catalogue of the Exhibition of Silversmiths' Work* at the Burlington Fine Arts Club, 1901, p. 139, M 5.). Two objects of special archaeological interest are stamps which were used by Arretine potters, one representing a dancing



FIGURE 2.—BRONZE STATUETTE OF A HORSE: NEW YORK.

girl, the other a reclining youth. A fragment of a stone vase is of Minoan origin, and shows a column similar to the columns on the Boxers' Vase, and a part of the figure of a boxer. The material is green steatite. A fragment of a Roman glass cup shows a Dionysiac scene in white relief on a blue background.

Two Chinese Mirrors.—S. C. B. R. reports that the Metropolitan Museum has acquired two Chinese bronze mirrors of the T'ang period, one pocket mirror showing a design in silver relief on the back, and another larger one, of which the back is covered with lacquer inlaid with a silver floral design. (*B. Metr. Mus.* XVIII, 1923, pp. 36-37; 4 figs.)

NORTHAMPTON.—**A Torso of Eros.**—In *Bulletin of Smith College* (Hillyer Art Gallery), 1923, pp. 2-6 (2 figs.), S. N. DEANE reports that a marble torso of Eros, formerly in private possession in Germany, has been acquired for the Smith College collection. It represents the god as adjusting his bow, not in the attitude of the Capitoline statue, but in one resembling the posture of an Eros in the British Museum (*Brit. Mus. Cat. of Greek and Roman Sculpture*,

III, No. 1674). It is apparently derived from a type of the late fourth century B.C.

PHILADELPHIA.—**A Statue of Nataraja.**—H. H. F. JAYNES reports that the Pennsylvania Museum has acquired by gift a bronze statue of the dancing Siva or Nataraja. It is inscribed with the date 4611 (1511 A.D.). Among statues of this subject it has unusual distinction in its composition and beauty of modelling. (*Pennsylvania Museum Bulletin*, XVIII, 1923, pp. 1-6; 2 figs.)

CANADA

TORONTO.—**Egyptian Necklaces.**—In *Bulletin of the Royal Ontario Museum of Archaeology*, May, 1923, pp. 8-10 (fig.), Miss C. G. H(ARCUM) calls attention to the three hundred Egyptian necklaces included in the Colonel Philpott collection recently purchased for the Ontario Museum.

Greek Coins.—As illustrations of the valuable collection of coins which the Ontario Museum of Archaeology is acquiring, Miss C. G. H(ARCUM) publishes a few fine examples of Greek coins from Southern Italy. (*Bulletin of the Royal Ontario Museum of Archaeology*, May, 1923, pp. 10-12; fig.)

Chinese Sculptures.—In *Bulletin of the Royal Ontario Museum of Archaeology*, May, 1923, p. 3 (fig.), C. T. C(URRELLY) reports that the Royal Ontario Museum has acquired a Buddhist marble statue of the T'ang period, from the province of Honan. The subject is a bearded man, seated on the ground, and represented with great vigor. *Ibid.* pp. 3-8 (7 figs.) is reported the acquisition of a complete set of grave potteries together with the tombstone of a general of the T'ang period.

EARLY CHRISTIAN, BYZANTINE, MEDIAEVAL, AND RENAISSANCE ART

ITALY

BERGAMO.—**The Moroni Collection.**—In *Dedalo*, III, 1923, pp. 569-584 (pl.; 12 figs.), A. L. MILESI describes the collection of Count Moroni in Bergamo. While it contains a number of important paintings by other artists, the body of it is made up of portraits by G. B. Moroni. Less than a century ago many of Moroni's paintings were to be seen in Bergamo, where practically his entire activity was located. Now most of them are scattered over the world; the Count Moroni collection is the only considerable one remaining.

FLORENCE.—**Unpublished Paintings by Masolino.**—In *Dedalo*, III, 1923, pp. 636-641, R. OFFNER publishes a painting (almost life-size) of San Giuliano in the parish church of San Giuliano at Settimo, near Florence, which he ascribes to Masolino and dates about 1430 (Fig. 3). The panel is apparently part of a now dismembered and scattered altarpiece. *Ibid.* pp. 633-635 (2 figs.), B. BERENSON publishes the predella, with a scene from the legend of San Giuliano. The predella is in the Ingres Museum at Montauban.

The First Sculpture by Michelangelo.—In *L'Arte*, XXV, 1922, pp. 177-180 (fig.), A. VENTURI presents in a convincing manner the hypothesis that the marble head of a cyclops-faun in the Museo Nazionale at Florence is the youthful work of Michelangelo's which Vasari and Condivi describe as having been



FIGURE 3.—ST. JULIAN BY MASOLINO: FLORENCE.

made as a copy and restoration of a damaged antique head in the collection of Lorenzo the Magnificent and as having elicited that prince's interest in the young artist.

A Painting by Cecchino Salviati.—In *Boll. Arte*, II, 1922, pp. 184-187 (pl.; 2 figs.), O. H. GIGLIOLI attributes to Cecchino Salviati a painting of the Pietà in the Pitti gallery which has previously been attributed to various other artists. Comparison with Salviati's Charity in the Uffizi shows an identity of figure types and style of painting. Further proof is given by a tapestry in the Galleria degli Arazzi, Florence. The composition here, which is documentarily attributed to Salviati, is, save for the mirror-wise placement and the elimination of some of the figures and rearrangement of one, the same as in the Pitti painting.

The Art Exhibition at Florence.—In *Rass. d'Arte*, IX, 1922, pp. 201-231 (22 figs.), O. H. GIGLIOLI describes a large number of the paintings, drawings and bindings in the recent great exhibition of antique art held in Florence. Most of the paintings here discussed are of the seventeenth, though there are some of the preceding century. The book bindings date from the fifth century to the nineteenth and include many which are extremely important.

MILAN.—**A Painting by Rubens.**—A painting of a subject, the Supplication of Job, hitherto unknown among the subjects represented by Rubens is published by S. Ricci in *Art in America*, XI, 1923, pp. 107-109 (fig.). A recent cleaning of the picture has revealed the signature of Rubens, and the high quality of the work places it in that artist's best period, 1615-1625. It is owned by C. V. Pietra, Milan.

A Sketch by Rubens.—In *L'Arte*, XXV, 1922, p. 237 (fig.), P. D'ANCONA describes a previously unpublished sketch which is clearly the work of Rubens. It is in the Greppi collection at Milan. Though the subject is The Three Graces, it really presents three portraits, the middle one probably representing Helen Fourment in her youth.

PERUGIA.—**Matteo Gattaponi.**—On the basis of stylistic relationship to the Collegio di Spagna in Bologna, recently shown to be the work of Gattaponi da Gubbio, the cloister of Santa Giuliana in Perugia is attributed to the same master by A. Muñoz in *Boll. Arte*, II, 1923, pp. 295-300 (6 figs.). 1376 is suggested as the date of the construction, since that date on a painting taken from the convent and now in the Perugia gallery, apparently refers to the general remodelling of the edifice.

ROME.—**The Tombs of Saints Peter and Paul.**—The newspapers recently reported that the bodies of Saints Peter and Paul had been found in the excavation of the church of S. Sebastiano at Rome. This is evidently incorrect, since according to tradition, while they were buried here originally, they were afterwards removed by Constantine to his basilica on the Vatican, and thence to the crypt of St. Peter's. In *Exp. Times*, XXXIII, 1922, p. 432, A. H. SAYCE reports a visit to the excavations at S. Sebastiano, and says that numerous *graffiti* from the third century onwards show that this place was visited by pilgrims as the burial place of the saints in the period before Constantine.

Frescoes of the School of Raphael.—Frescoes originally painted in the Villa Mattei on the Palatine and later taken from the walls and lost trace of are published by E. LAVAGNINO in *L'Arte*, XXV, 1922, pp. 181-187 (11 figs.). The frescoes in this group that did not go to the Hermitage have now been recog-

nized in the collection of the Malanca family in Rome; they agree perfectly with Passavant's description. They include, besides some signs of the zodiac, figures of the muses in architecturally painted niches and two large figure compositions representing Mnemosyne surrounded by Muses, and the Marriage of Hercules. They show the style of Giulio Romano as directly inspired by Raphael.

VERONA.—*The Frescoes of Mantegna.*—In *Gaz. B.-A.* VI, 1922, pp. 365-375 (5 figs.), L. HOURTICQ, after an appreciation of the well-known San Zeno altarpiece by Mantegna, describes the frescoes 'on the entrance wall to the Pellegrini chapel in the church of Santa Anastasia, Verona. These frescoes bear such close relationship to the San Zeno altarpiece as to warrant their ascription to the same period of that artist's activity, about 1456-1460. The decoration consists of four saints standing in painted niches, illusionistically represented as actual architectural forms. Most care seems to have been taken with Mantegna's patron saint, Andrea, a figure which Mantegna almost exactly reproduced years later in his engraving of the resurrected Christ between Sts. Andrea and Longinus. The St. John is practically the same as the one in the San Zeno altarpiece.

SPAIN

MADRID.—*A Painting of the Virgin.*—In *Gaz. B.-A.* VI, 1922, pp. 348-352 (pl.), M. NICOLLE writes of an unusually interesting painting recently acquired by the Prado Museum. The subject represented is the Virgin and Child enthroned between two saints, one of whom presents the donor, who wears the cross of the order of Montesa. Most features of the painting are Flemish, but certain details, such as the type of Child, are taken from Italian art. The conclusion in regard to authorship is that the painter was a Spaniard of the end of the fifteenth century who borrowed freely from Italian and from Flemish art without assimilating and harmonizing the foreign elements. He has nevertheless attained a beautiful composition, which suggests the hand of a real master, probably that of Rodrigo d'Osona.

FRANCE

NANCY.—*A Painting by Antonello da Messina.*—A painting of St. Catherine in the Nancy Museum is identified by R. FRY, in *Burl. Mag.* XLII, 1923, pp. 181-182 (2 pls.), as the work of Antonello da Messina. Though badly damaged, it still shows this artist's peculiarities of drawing and bears close resemblance to other of his paintings, such as the Virgin in the Munich Pinakothek. In the Nancy Museum it is labeled as St. Lucy, Florentine School.

PARIS.—*A New Ancestor of Wood Engraving.*—In *Gaz. B.-A.* VII, 1923, pp. 83-90 (pl.; 5 figs.), A. BLUM publishes a wood engraving of the Bearing of the Cross, in the collection of Baron Rothschild, which is to be classed in the same category with the "bois Protat," which attracted attention some twenty years ago as the oldest preserved wood engraving. The one here published is to be dated at about the same time, late in the fourteenth century, and is to be assigned to the same source, Burgundy.

POITIERS.—*St. Radegund's Reliquary.*—In *Ant. J.* III, 1922, pp. 1-12 (3 pls.; 3 figs.), the reliquary of St. Radegund, now preserved in the convent of Saint-Croix at Poitiers, is fully described and accurately illustrated for the

first time. It is of importance as the earliest dated object decorated with enamel in a Byzantine workshop. Sir MARTIN CONWAY tells how it was obtained for the devout Queen Radegund by the poet Fortunatus, and relates its subsequent history. Mr. O. M. DALTON remarks (*Ibid.* p. 12) that the scroll pattern of the background of the reliquary sets at rest any doubts of its antiquity.

GERMANY AND AUSTRIA

AUGSBURG.—Early Sixteenth-Century Sculptors.—In *Mh. f. Kunstw.* XV, 1922, pp. 180-192 (2 figs.), E. SPAETH publishes data concerning Gregor and Michel Erhart and Adolf Daucher, three Augsburg sculptors of about 1500 whose importance is already well-known to historians of art but whose life and work in detail have been obscure. The source of the present information is an account book of Ulrich and Afra recently come to light in the archives of Augsburg.

BERLIN.—A Painting by the Engraver J B.—A small German painting of the fifteenth century, representing Venus and Amor, has recently been given to the Kaiser-Friedrich Museum. It is attributed by M. J. FRIEDLÄNDER (*Ber. Kunsts.* XLIV, 1923, pp. 24-26; 2 figs.) to the engraver known as the Master J B, whom Friedländer identifies with the painter Georg Pencz. (*Repertorium für Kunstwissenschaft*, XX, 1897, p. 136 ff.)

An Unknown Derschau Woodcut.—In *Z. Bild. K.* LVII, 1922, p. 101 (pl.), M. J. FRIEDLÄNDER publishes an impression from an original woodblock in the Derschau collection, of which, so far as is known, there were previously no extant impressions. The subject represented is the Annunciation. The work strongly suggests that of Holbein the Elder in about 1508, but with present information a definite ascription cannot be made.

ESSEN.—A Crucifixion by Grünewald.—In the recent active interest in Grünewald, critics have been much on the alert for the lost panel painting of the Crucifixion originally owned by Duke Wilhelm of Bayern and long known only from the description, drawings, and copies. In *Jb. Preuss. Kunsts.* XLIII, 1922, pp. 60-62 (pl.), M. J. FRIEDLÄNDER publishes a panel painting lately acquired by Landrath Schoene at Essen which is believed to be that much desired original. It is in a fairly good state of preservation and forms a valuable addition to the monuments ascribable to Grünewald.

HAMBURG.—A Botticelli Drawing.—In *L'Arte*, XXV, 1922, p. 188 (fig.), A. VENTURI recognizes in a drawing of a nude woman, which in the Hamburg Museum is labeled "Manner of Botticelli," a drawing by that master himself. It is a work of his later years.

VIENNA.—A Madonna by Altdorfer.—A rediscovered Madonna by Albrecht Altdorfer which has recently been acquired by the Kunsthistorisches Museum, Vienna, is of peculiar interest as being the latest dated painting by this great master—it is dated 1531—and as showing the close relationship he bore to Dürer in his late work. (*L. BALDASS, Burl. Mag.* XLII, 1923, pp. 187-188; pl.)

A Drawing by Leonardo.—In *L'Arte*, XXV, 1922, p. 232 (pl.), A. VENTURI publishes a splendid reproduction of a drawing of a girl's head which he has previously assigned to Leonardo. It is in the Albertina at Vienna, where it is attributed to Lorenzo di Credi.

SWEDEN

STOCKHOLM.—**A Weather Vane of Viking Type.**—A gilded weather vane which once stood on the church at Söderala has been acquired by the State Historical Museum at Stockholm. It has the form of a thin plate of bronze, of which the rim is engraved, while its further ornament is formed by piercing the metal in order to leave the forms of fantastic animals, which develop into loops and scrolls. A plastic animal is also attached to the upper rim. BERNHARD SALIN, who publishes this relic in *Fornvännen*, XVI, 1921, pp. 1-22 (22 figs.), believes that it once had a place on a Viking ship, and that it is a product of the Nordic culture which we find in various parts of the British Isles.

RUSSIA

PETROGRAD.—**Two Italian Bronzes.**—In *Gaz. B.-A.* VI, 1922, pp. 339-347 (4 figs.), E. DE LIPHART writes of two bronze statuettes in a private collection in Petrograd. One, showing the Madonna standing and holding the Child, is evidently a study for the marble statue of that same subject on the tomb of the bishop NICHESOLA in the cathedral at Verona. Sansovino, the author of both statuette and statue, shows more spontaneity and freshness in the former. In the bronze statuette of a male figure, which probably represented Moses with the tablets of the law, we may recognize the work of Gerolamo Campagna.

GREAT BRITAIN

LINCOLNSHIRE.—**Early Carved Stones.**—In *Ant. J.* III, 1923, pp. 118-121 (2 figs.), A. W. CLAPHAM calls attention to five carved stones which were discovered near the church of South Kyme in Lincolnshire, and are now built into the north side of the modern chancel of this church. According to a note by E. C. R. ARMSTRONG these carvings are not of a single group. One which shows spirals is Irish. Two with frets and interlaced bands may be Irish, but are not certainly so. The other two, one of which shows an eagle's head, and the other a vine-scroll pattern with birds, are probably Northumbrian.

LONDON.—**An Ivory Diptych.**—An ivory diptych which was once shown in the cathedral at Palermo, and has for some years been lost to sight, was recently bought by Mr. F. E. ANDREW of Cardiff at the sale of the collection of Mr. D. M. CURRIE, and is now exhibited at the Victoria and Albert Museum. It is for the first time fully described by ERIC MACLAGAN in *Ant. J.* III, 1923, pp. 99-116 (4 pls.). On the left-hand leaf are represented the miracle of the Loaves and Fishes, the Healing of the Blind Men, and the Healing of the Man with the Palsy; on the right-hand leaf, the Raising of Lazarus, the Miracle of Cana, and the Healing of the Leper. Mr. MacLagan concludes from his study that the diptych is to be dated early in the fifth century. His paper is discussed by O. M. DALTON and others, *Ibid.* p. 117. Mr. Dalton suggests that analogies to this work should be found among early Carolingian ivories.

Two Unpublished Paintings.—In *Burl. Mag.* XLII, 1923, pp. 92-97 (pl.), T. B. publishes a painting of the Madonna and Child by Neri di Bicci which is strikingly beautiful in design and which betrays the influence of Botticelli's Chigi Madonna, in Mrs. Gardner's collection. Another painting of the Madonna, this time with two saints, is important because signed by the sixteenth century *retardataire*, Marcellus Koffermans, to whom so many paintings of

varying characteristics have lately been ascribed. This painting by Koffermans is in the possession of Mr. Arthur Tooth. The one by Neri di Bicci belongs to Mr. Annesley Gore.

A Historical Plate.—In *Faenza*, X, 1922, pp. 132-143 (3 pls.), G. BALLARDINI writes concerning a plate in the collection of F. Leverton Harris, London, the decoration of which is shown to represent an episode related to Charles VIII's invasion of Italy (Fig. 4). A ship, ready to set sail, is seen



FIGURE 4.—FAENTINE PLATE: LONDON.

loaded with bags of money; the doge, attended by a group of citizens, points with one hand to the bags and with the other to a motto, which may be translated, "deeds, deeds, deeds, not words." It is a representation of the very material succor sent to Naples in 1495, at the time of the formation of the confederation, in which Venice played so prominent a part. The technique and style of the plate is clearly Faentine, very closely similar to a lover's cup dated 1499 in the Museo Civico, Bologna, which was made by a Faentine atelier working in Venice. It seems probable that the London example comes from the same atelier.

Italian Medals.—In the twenty-seventh installment of 'Notes on Italian Medals,' G. F. HILL, in *Burl. Mag.* XI, 1923, pp. 38-47 (pl.), describes a number of fifteenth- and sixteenth-century medals recently acquired by the British Museum.

Old Masters Exhibition.—In *Burl. Mag.* XLII, 1923, pp. 53-54 (3 pls.), R. L. FRY writes of some of the more interesting paintings recently seen in the Old Masters Exhibition of Messrs. Agnew. A Madonna and Child labelled Piero di Cosimo in the exhibition is probably by that artist, but done much in imitation of Lorenzo di Credi. The portrait of Titus studying by Rembrandt, as seen after its recent cleaning, is one of the master's best works. A portrait of a man attributed to del Sarto is no doubt by Pontormo. Finally, Titian's late period at its best was represented by the canvas of Venus and Adonis.

Honthorst, Fabritius, and de Witte.—Important paintings by three Flemish artists, recently acquired by the National Gallery, are discussed by C. HOLMES in *Burl. Mag.* XLII, 1923, pp. 82-88 (pl.). Honthorst's Christ before Pilate shows how superior this artist was in his early activity, before he lost his youthful enthusiasm. Karel Fabritius' View of Delft is miniature-like in finish, and its unusual composition is in keeping with this artist's other experimental work. It shows the same oriental influence that one finds in the pottery of the time. Similar modern tendencies are to be seen in the painting by Emanuel de Witte, representing the Fish Stall.

A Drawing by Titian.—In *Burl. Mag.* XLII, 1923, pp. 192-197 (pl.), W. G. CONSTABLE publishes a drawing which was in the recent exhibition of Messrs. Agnew. The figures in the foreground are apparently by Titian in his early period; but the landscape seems to be by another hand, probably that of Domenico Campagnola.

NORTHERN AFRICA

DJEMILA.—A Group of Christian Buildings.—In *C. R. Acad. Insc.* 1922, pp. 380-407 (plan), PAUL MONCEAUX describes in detail a group of churches and other buildings of Christian origin recently discovered at Djemila (ancient Cuicul) by M. Ballu, architect in the Service des Monuments de l'Algérie. This ensemble is situated about 150 metres south of the ancient theatre. It includes a church of which the existence has been known since 1840, but which has now been cleared and proves to possess a well-preserved mosaic pavement; a large basilica with five naves, excavated in 1921, and a third church or chapel; two streets; and a fine baptistry excavated in 1922. The smaller basilica belongs to the fourth century; the larger was built by the bishop Cresconius about 420. The existence of such a large group of ecclesiastical buildings in so small a town is probably due to the popularity of a local cult. Martyrs of Cuicul are commemorated in a long mosaic inscription discovered here in 1919. It was probably a pilgrimage site. The clergy may also have been ambitious that the splendor of their churches should rival that of the shrine of Tipasa, a frequented pilgrimage site in Mauretania.

UNITED STATES

BOSTON.—Coptic Weavings.—The Rt. Rev. Mgr. A. T. Connolly has presented to the Museum of Fine Arts in Boston thirty-six pieces of Coptic weaving and embroidery discovered in a cemetery near Schêch Abâde. (*B. Mus. F. A.* XXI, 1923, p. 6; fig.)

Fifteenth-Century Engravings.—In *B. Mus. F. A.* XXI, 1923, pp. 1-4 (10 figs.), H. P. R(OSSITER) reports that the Museum of Fine Arts in Boston has acquired by gift and purchase a small but remarkable collection of fifteenth-

century engravings, chiefly German and Italian. It includes examples of the work of Schongauer, the Master E. S., the Master M Z, and the Florentine school.

Two French Drawings.—The Museum of Fine Arts has purchased two French drawings of the sixteenth century: a portrait of the Duc de Montpensier, by François Clouet, and a portrait of the Comte de Quelus, by Étienne or Cosme Dumoustier. (C. H. HAWES, *B. Mus. F. A.* XXI, 1923, pp. 5-6; 2 figs.)

CAMBRIDGE.—**A Capital from Avignon.**—Another Romanesque capital has been added to the already distinguished collection of mediaeval French sculpture in the Fogg Museum. This one was originally part of a cloister attached to the Cathedral of Avignon. The cloister was destroyed at the time of the French Revolution. On the four sides are represented four scenes from the life of Samson. It is described by M. Labande in his monograph on the Cathedral of Avignon, and by the Comte de Lasteyrie, in his *Architecture Romane*, p. 631. The work is dated about the middle of the twelfth century. (A. K. PORTER, *Fogg Museum Notes*, I, 3, January, 1923, pp. 2-15; 12 figs.)

DETROIT.—**German Gothic Sculpture.**—In *Art in America*, XI, 1923, pp. 165-170 (7 figs.), T. DEMMLER publishes several examples of fifteenth-century German sculpture in the Ralph N. Booth collection, Detroit. They can be quite definitely assigned to schools of southern Germany and of the Lower Rhine.

NEW YORK.—**A Hispano-Arabic Box.**—The Metropolitan Museum has acquired a cylindrical box of ivory, carved in 999 A.D. for the Vizir Abu-al-Mutarrif of Cordova. It is covered with an intricate design including conventional and floral as well as animal and human motives. (J. B., *B. Metr. Mus.* XVIII, 1923, pp. 6-8; 2 figs.)

A Romanesque Archivolt.—An important example of Romanesque decorative sculpture has been added to the collection of the Metropolitan Museum. It is an archivolt of white marble, said to have come from Narbonne in south-eastern France, and dated in the twelfth century. A series of real and fantastic animals are figured upon it. (H. S., *B. Metr. Mus.* XVIII, 1923, pp. 9-10; fig.)

A French Capital.—In *B. Metr. Mus.* XVIII, 1923, p. 29 (3 figs.), J. B. (BECK) describes a capital of the twelfth century, of South French origin, recently acquired by the Metropolitan Museum. On each face is a lion, ingeniously adapted to take the place of the projecting leaves of the Corinthian capital.

A Gothic Statue.—A polychrome Gothic statue of the Virgin and Child, an example of French sculpture of the late fifteenth century, has been given to the Metropolitan Museum by M. G. J. Demotte. (*B. Metr. Mus.* XVIII, 1923, p. 46; fig.)

Two Flemish Reliefs.—Two marble reliefs of Flemish origin, belonging to the early fifteenth century, have been purchased by the Metropolitan Museum. They represent four scenes from the story of the Invention of the Cross in the Golden Legend. (H. S., *B. Metr. Mus.* XVIII, 1923, pp. 151-152; fig.)

A Picture of St. Ursula.—The Metropolitan Museum has recently acquired a picture of St. Ursula, surrounded by twelve of her virgins, a work of the Venetian school of about 1400 A.D. Dr. Sirén has attributed it to Guariento (*Burl. Mag.* XXXIX, 1921, p. 169). Lionello Venturi conjectures that it is by

Niccolò di Maestro Pietro or some closely related painter. (B. BURROUGHS, *B. Metr. Mus.* XVIII, 1923, pp. 144-145; fig.)

A Painting by Crivelli.—In *Art in America*, XI, 1923, pp. 119-122 (pl.). F. M. PERKINS publishes a painting of the Madonna and Child in the collection of Mr. Arthur Lehman which is clearly attributable to Carlo Crivelli. Though sadly mutilated—the picture has been cut off at top and bottom—the work is a fine example of the early style of Crivelli and of the breadth of treatment and largeness of design to which he at times attained. It may be dated about 1473-1476.

A Painting by Roberto Oderisi.—In *Art in America*, XI, 1923, pp. 69-76 (3 figs.), B. BERENSON publishes a small panel in the possession of Mr. Grenville L. Winthrop which falls into the group of paintings assignable to the Neapolitan artist Roberto Oderisi. The most considerable works attributed to this artist are the *Incoronata* frescoes at Naples. The panel here published is entirely worthy of this painter, the best painter that Naples produced before the seventeenth century. The subject is the Passion told in symbols and abbreviated scenes, with the *Pietà* given predominance. The composition is excellently designed and the coloring is harmonious and strong.

A Portrait by Rubens.—In *B. Metr. Mus.* XVIII, 1923, pp. 116-117 (fig.), B. BURROUGHS reports that the Metropolitan Museum has purchased a portrait by Rubens, formerly in the Marzius collection at Kiel. The subject is an elderly man of vigorous and somewhat florid type, with a long white beard.

PHILADELPHIA.—A Venetian Painting.—A recent addition to the Wilstach collection in the Pennsylvania Museum is a Venetian painting of uncertain authorship, called "An Allegory." Mr. Berenson attributes it to Palma Vecchio; Professor Mather to Cariani, a pupil of Palma, influenced by Giorgione. Dr. Valentiner suggests Romanino, another pupil of Giorgione. A. E. B., who discusses the picture briefly in *Pennsylvania Museum Bulletin*, XVIII, 1923, pp. 7-8 (fig.), agrees with Dr. Mather, finding the drawing "too weak, the conception too derivative, to be by a great master."

PROVIDENCE.—A Flemish Limestone Group.—M. G. J. Demotte has presented to the Rhode Island School of Design a Flemish sculpture in limestone, representing Saint Anne, the Virgin, and the Child Jesus. Saint Anne is teaching the Virgin to read. The work is dated in the fifteenth century. (L. E. ROWE, *B. R. I. Des.* XI, 1923, pp. 13-15; fig.)

AMERICAN ARCHAEOLOGY

GENERAL AND MISCELLANEOUS

CHICAGO.—Talamancan Jewelry.—An anonymous donor has given to the Art Institute of Chicago a collection of eighteen pendants and amulets of Talamancan origin. (J. MacD., *Bulletin of the Art Institute of Chicago*, XVII, 1923, pp. 17-18; fig.)

COLOMBIA.—Chibcha Sculpture.—In *Ber. Kunst.* XLII, 1922, pp. 127-129 (5 figs.), H. PREUSS describes his discoveries at San Agustín in Colombia, on the upper Magdalena River, in 1913-1914. Some eighty stone statues were found on this site, where the Italian cartographer Cordazzi and other travellers had previously discovered about forty. The place of discovery seems to have

been a sacred precinct, since there is no sign of human occupation. Some of the statues stood in the open air, others in rectangular stone structures, one side of which was open in order to permit access for cult observances. Tombs of similar rectangular form were found in the same precinct, and some contained stone coffins, but there was no trace of human remains. A few of the smaller statues have been sent to Berlin, and casts were made from a considerable number.

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Scholars

Arthur Lincoln Frothingham

AMONG archaeologists in the United States none was more widely known or more learned than Arthur Lincoln Frothingham, who died of heart disease at Princeton, New Jersey, July 28, 1923. Born in Boston, June 21, 1859, he was taken to Rome while still a child, and his education was almost entirely foreign. From 1868 to 1873 he was in the Academy of the Christian Brothers and from 1875 to 1881 in the Catholic Seminary of St. Apollinaris and the Royal University in Rome. Here it was that he acquired the mastery of Semitic languages to which he owed his unique position among American archaeologists. In 1883 he attained to the degree of Doctor of Philosophy at Leipzig. He was Fellow in Semitic Languages and Lecturer on Archaeology at Johns Hopkins University, 1882-1886; Professor of Archaeology and the History of Art, 1887-1898, and Professor of Ancient History and Archaeology, 1898-1906, at Princeton University. In 1885 he founded the **AMERICAN JOURNAL OF ARCHAEOLOGY**, of which he was editor and

American Journal of Archaeology, Second Series. Journal of the
Archaeological Institute of America, Vol. XXVII (1923), No. 4.

proprietor until, in 1896, it was taken over by the Archaeological Institute of America. In the year 1895-1896 he was Associate Director of the American School of Classical Studies in Rome. In 1896 he received the honorary degree of Master of Arts from Princeton University. He was a member of the German Archaeological Institute, the Société des Antiquaires de France, the Société française d'Archéologie, and the American Oriental Society. In 1912 he was the United States delegate to the International Congress of Art and Archaeology at Rome.

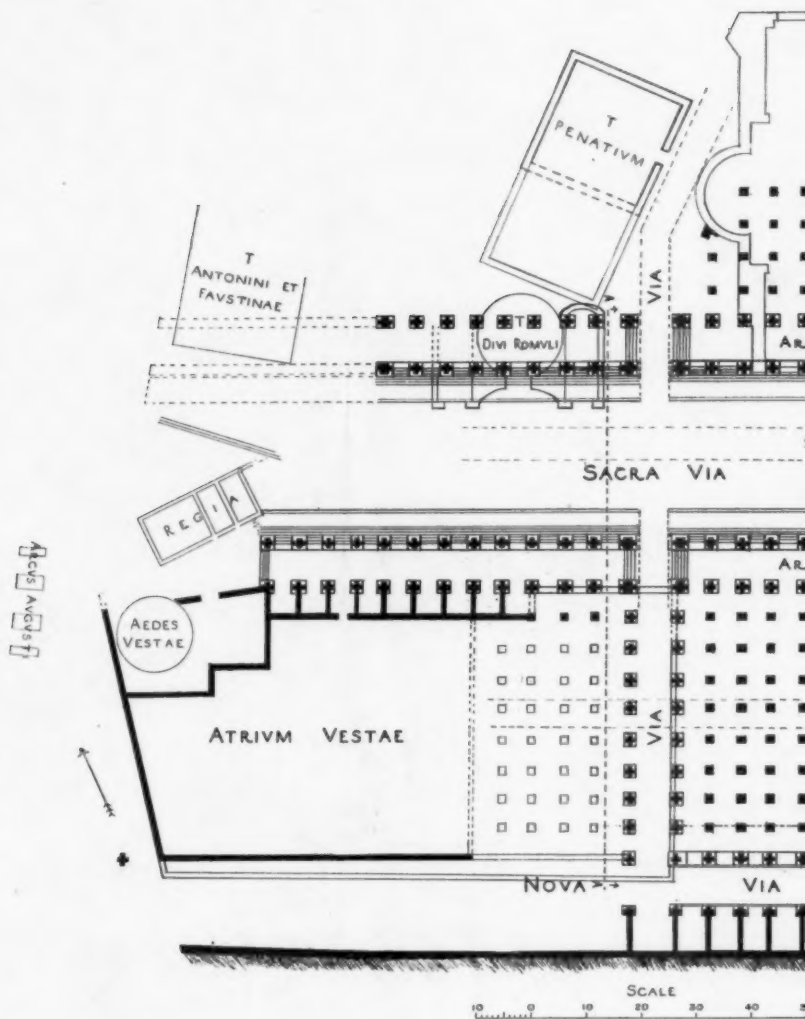
Frothingham's chief books are: *A History of Sculpture* (with Allan Marquand), *Mediaeval Art Inventories of the Vatican*, *Monuments of Christian Rome*, *Roman Cities of Italy and Dalmatia*, and *A History of Architecture*, Vols. III and IV (a sequel to Vols. I and II by Russell Sturgis). He was also the author of numerous articles on subjects connected with art and archaeology in the *AMERICAN JOURNAL OF ARCHAEOLOGY* and in other periodicals, English, French, and Italian, as well as in the *New International Encyclopaedia*. Perhaps his most noted article is that (*Monuments Piot*, XII) in which he proclaimed the discovery, or rather the identification, of the architect's model of the Church of Saint Maclou at Rouen.

For many years a member of the Archaeological Institute of America, of which he was Secretary in 1884, Frothingham was always deeply interested in its progress and always ready to be of service. He was earnest in whatever he undertook, whether it was archaeological investigation or patriotic work in the war or in combating radicalism or other movements which he regarded as dangerous. He had withal a marked sense of humor and was a delightful companion. Those who had the good fortune to enjoy his hospitality in his summer home at Norfolk, Connecticut, will remember him as a cordial and genial host. His death leaves a gap which can hardly be filled.

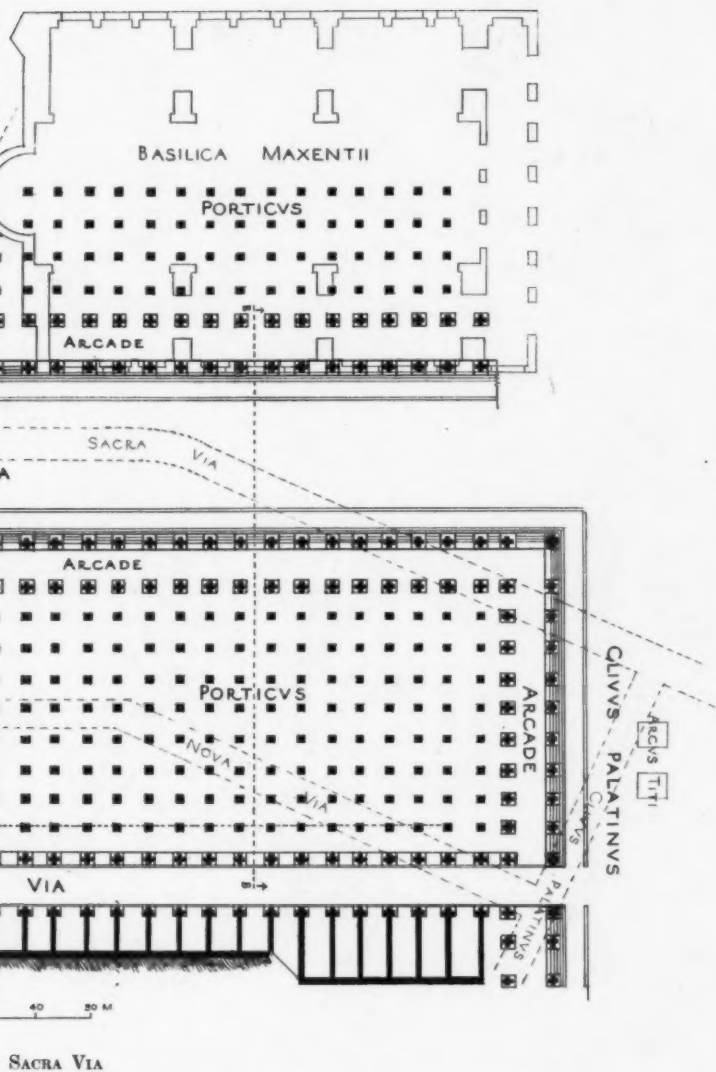
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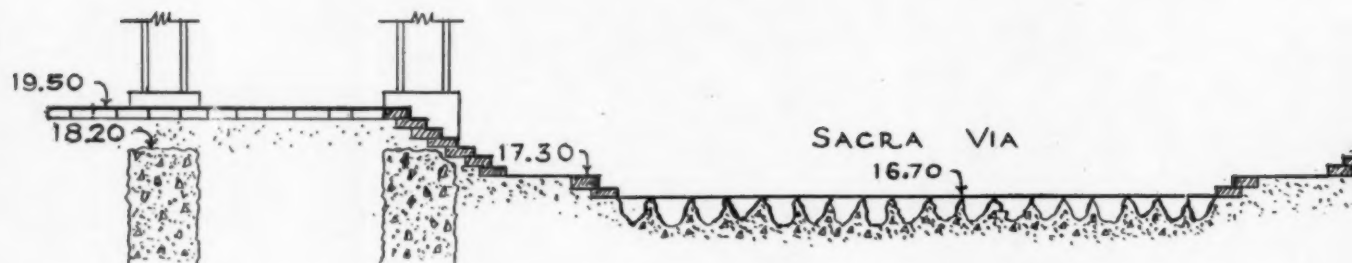


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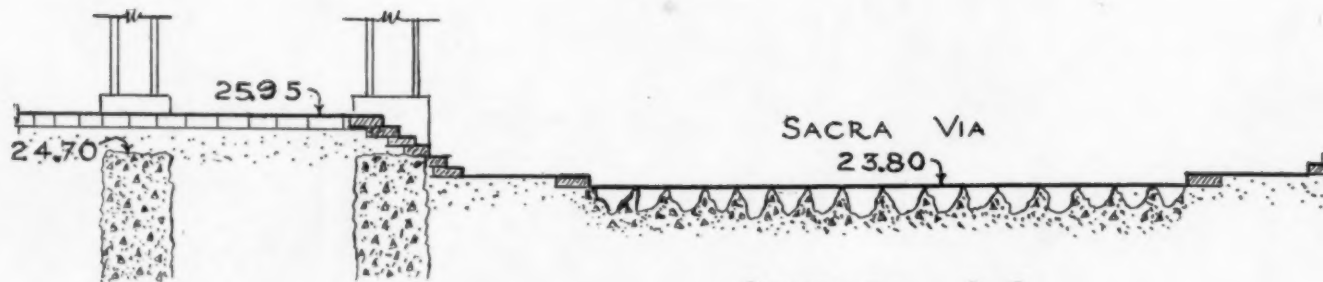


THE NERONIAN SACRA VIA



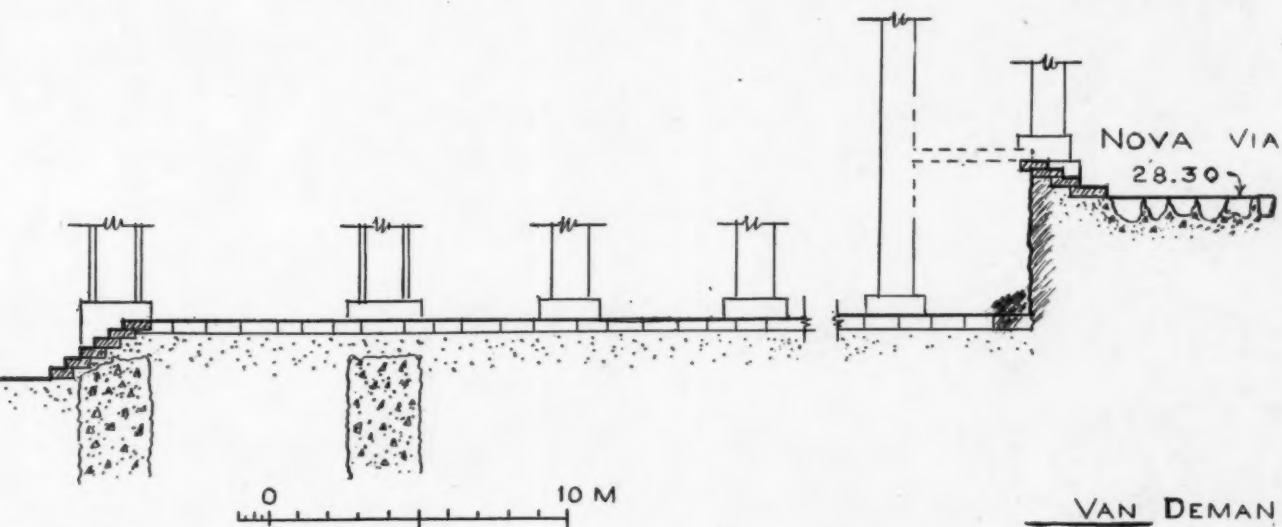
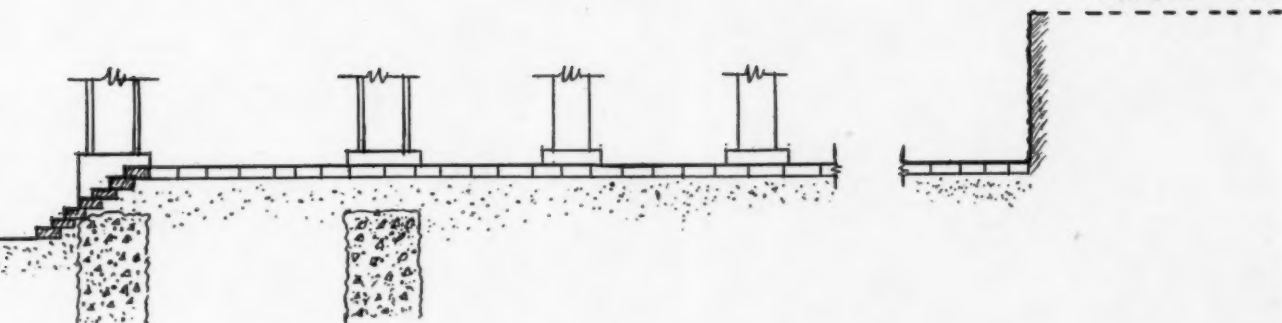


SECTION A-A



SECTION B-B

NOVA VIA



VAN DEMAN

A VIA: CROSS-SECTION

THE NERONIAN SACRA VIA

[PLATES III-IV]

THE region to the east¹ of the Forum, stretching from the regia to the arch of Titus (see Fig. 1), is to most modern scholars no less than to the world at large a *terra incognita*. While less familiar than its more famous neighbors, the Forum and the Palatine, it



FIGURE 1.—REGION OF THE UPPER SACRA VIA.

was, however, not unknown in mediaeval times, since the ruthless privateers of that period made it also their prey, after the Forum had ceased to satisfy their greed for building materials. The portion of the region further to the west naturally suffered most from their barbarous invasion, and the splendid edifices which formed a

¹ The general line of direction of this region is northwest to southeast. For the sake of convenience, however, the side of the Sacra Via now occupied in large part by the basilica of Maxentius is, throughout the present discussion, referred to as north and that towards the Palatine as south.

monumental wall between it and the Forum were torn in pieces even to their foundations for their treasures of marble, travertine and tufa. That their vandalism was extended also further up the slopes to the very top both of the Sacra Via and the Nova Via has been shown, in the modern excavations, by the wreck of walls and even of foundations wrought in the relentless search for the huge blocks of travertine belonging to the great pillars which marked so conspicuously the whole region.

With the modern revival of interest, a half century ago, in the buried remains of the more important centres of ancient Rome's political life, the excavations were confined, for a considerable time, to the Forum itself. The region to the east of it, though closely bound to it, from the earliest times, by the Sacra Via, received but little notice, owing in great part to the false views prevailing concerning the ancient topography of the whole region. In 1878-79, however, modern scholars began to turn their attention to it for the first time.¹ The excavations at that period, though extending along the whole line of the Sacra Via, were carried on the south but half way to the Nova Via, while the space to the north was left untouched. On account of the vast amount of earth to be removed,² the general level reached was still six metres above the remains of the better Roman period. At 1.10 m. below the rude mediaeval remains, the pavement of the ancient Sacra Via itself, though of a late period, was, however, laid bare throughout its entire length,³ with a well-built sewer beneath it, both of which were recognized by Lanciani as ancient, though assigned to the period of Severus.⁴ At that time also the extensive remains of corridors, cryptoporticus and rooms were discovered behind the basilica of Maxentius, in some of which the ancient frescoes were still preserved,⁵ as well as the older walls incorporated later in the structure of the western apse of the basilica.⁶ While the attention of the excavators, as of the public, was focussed, at that time, upon the more striking revelations in the atrium Vestae, the recognition of the existence of the great building to the east of it, with which we are at present especially concerned, was at least foreshadowed by the discovery of the great travertine pillars in and near the atrium (see Fig. 2), which, though themselves removed in the Middle Ages, were still traceable by their

¹ For the appearance of the region before the excavations, see *B. Com. Rom.* 1903, p. 21, fig. 6. Cf. Fig. 1.

² *Not. Scav.* 1878, p. 234.

³ *Not. Scav.* 1878, p. 341; 1882, p. 219.

⁴ *Op. cit.* 1879, p. 264.

⁵ *Op. cit.* 1882, pp. 219-20

⁶ *Op. cit.* 1879, p. 312.

imprint on the walls by which they had been partly enclosed at a later time,¹ as well as of the massive concrete foundations north of the atrium, the top of one of which is shown in the accompanying illustration (Fig. 2), upon which rested the porticus to which they belonged, commonly known as the porticus Margaritaria.² In 1883 still further remains of the same great structure, or group of structures, were brought to light, stretching from the atrium Vestae to



FIGURE 2.—FOUNDATION WALL OF THE ARCADE NORTH OF THE ATRIUM VESTAE.

the arch of Titus, which were correctly recognized later by Lanciani³ as parts of a single architectural unit, though attributed to the Severan period.⁴

In 1899–1900 the work was again resumed and the excavations were carried, at certain points between the Sacra Via and the Nova Via, to the level of the Augustan period two metres below.⁵

¹ *Op. cit.* 1878, p. 341; 1883, p. 470. For these walls, or better strengthening pillars, see p. 403.

² *Op. cit.* 1879, tav. VII; 1882, p. 228 and tav. XV.

³ *Ruins and Excavations*, pp. 207–209.

⁴ *Not. Scav.* 1883, p. 470.

⁵ For the appearance of the Sacra Via at this period, see *B. Com. Rom.* 1903, p. 20, fig. 5. Cf. Fig. 1.

Beneath the pavement of the Sacra Via of the same period was found also an earlier sewer of cut stone, which had been in part restored in concrete faced with reticulate of the Augustan type.¹ The upper pavement of the later imperial period, which was erroneously held to be mediaeval, was wholly destroyed as well as almost all the remains of another below it of the early empire.² The two massive concrete foundation walls opposite and parallel to the basilica of Maxentius, which are still so conspicuous a feature in the region, were also, at this time, brought to light.³ These walls,⁴ which rise from one to two metres above the Augustan Sacra Via, on top of which they were partly built, were at once recognized as the foundations of a monumental colonnade, or porticus, which was held to be closely united in origin with the basilica of Maxentius, to whose period they have been commonly assigned.⁵ Between the line of this porticus and the newly-found Nova Via, the remains were discovered also of a number of rows of small square rooms, which were held to be a part of the porticus Margaritaria⁶ mentioned above, although in a plan made in 1900⁷ they bear correctly the name of *horrea*. At the same time on the north between the Sacra Via and the basilica of Maxentius, the remains were found, at a lower level, of a group of smaller rectangular rooms arranged in rows on either side of a common back wall and opening on broad passage-ways or courts with herring-bone pavements of an early type. This group of structures, which from their general plan were recognized as *horrea*, were held to be the famous *horrea piperataria* of Domitian.⁸ But few remains were brought to light further to the north, though a number of walls had been seen and reported early in the last century at various points under and near the basilica of Maxentius.⁹

In 1908 during the progress of an investigation of the structural history of the atrium Vestae, the coincidence in orientation as well as agreement in type of construction was discovered between the

¹ *Not. Scav.* 1899, pp. 78, 266, *B. Com. Rom.* 1899, p. 57. *Cl.R.* 1899, pp. 186, 322.

² *Not. Scav.* 1899, p. 265. *Cl.R.* 1899, p. 467; 1900, p. 239.

³ *Cl.R.* 1899, p. 467. *Röm. Mitt.* 1902, p. 95. Cf. *Not. Scav.* 1900, plan opposite p. 220.

⁴ For the appearance of these walls at the time of their discovery, see *B. Com. Rom.* 1903, p. 24, fig. 7.

⁵ *Röm. Mitt.* 1902, p. 95. *Cl.R.* 1905, p. 76; 1906, p. 283. *B. Com. Rom.* 1899, p. 256.

⁶ *Cl.R.* 1900, p. 238. Cf. Lanciani, *Ruins and Excavations*, p. 208, fig. 83.

⁷ *Not. Scav.* 1900, plan opposite p. 220. Cf. *Cl.R.* 1906, p. 283.

⁸ *B. Com. Rom.* 1900, pp. 8-13 and tav. I-II. *Cl.R.* 1900, p. 239.

⁹ Nibby, *R.A.* II, p. 243; *R.F.*, p. 203 and plan opposite p. 208.

massive concrete foundations opposite the basilica of Maxentius (Fig. 3) referred to above and those belonging to the arcade north of the atrium. Later examination revealed the fact, moreover, that they not only belonged to a single structure but that this structure formed a part of a much larger building, or, better, group of buildings, extending along the entire course of the Sacra Via as well as along the slopes of the Palatine and Velia on either side of it. The



FIGURE 3.—FOUNDATION WALLS OF THE SOUTH ARCADE.

main features of this larger architectural whole, of which the various groups here referred to are but the *disiecta membra*, are still traceable, though in part concealed by later restorations and broken by the mediaeval vandals.

Though closely united to the greater and more famous public monuments on the adjacent hills, the more humble group of buildings, consisting in the main of private shops and houses, which occupied the depression between these hills and was bound together by the Sacra Via, may be regarded as both architecturally and structurally independent. The exact time at which it began to be regarded as a distinct district is not known. The antiquity of

the yearly contest for the head of the October *equus* between its inhabitants, known as the *Sacravienses*, and the dwellers in the Subura points clearly, however, to its popular, if not formal, recognition at a very early period. During the later republic, the residential character of the quarter gradually yielded its place of importance to the commercial fame of the district, which, at a later time, assumed a permanent form in the complex group of structures known as the *horrea piperataria et Vespasiani*.

The general extent of the district differed but little, probably, at the various periods in its history. Its exact boundaries, however, suffered somewhat from the various changes in general plan, especially that following the fire of Nero in 64 A.D., as is clear from the new line of the streets on two, if not three, sides of it after that catastrophe. The limits of the region towards the north are uncertain, except in the late empire. On the south the Nova Via formed, probably, the line of separation between the district and the Palatine through all the different periods. In its earlier history, however, it ran at some distance from the foot of that hill, though probably parallel to it. The exact boundary of the region towards the east is not clear. On the west it reached originally the lower end of the Forum, though, at a later time, its actual limits were pushed somewhat to the east by the erection of the regia and the buildings associated with it. Towards the east and west the district was divided by the saddle between the Palatine and the Velia into two distinct parts. With the latter of these divisions only, that towards the west, to which the name of Sacra Via was commonly restricted by the ancients, are we concerned at this time.

Owing to the natural configuration of the ground, which rose abruptly on the north and south and less rapidly towards the east, the district showed at all periods much diversity in level. Many of these irregularities were corrected in later times by the creation of a series of broad artificial terraces by which the complex group of buildings was carried to the heights of the hills on either side, while the more gradual ascent toward the east was overcome by a gradual rise in the level of these buildings, following the natural slope of the ground though broken at regular intervals by a more abrupt change in elevation.

Unlike the Forum, the region of the Sacra Via as a whole shows but few changes in its general orientation, especially during its earlier history. In the orientation of the monuments of that period belonging to the precinct of Vesta, which formed the boundary be-

tween the region of the Sacra Via and the Forum, the supremacy of the religious formalism of the Etruscans over the practical sense of the Romans is clearly evident.¹ Further to the east, however, the line of direction imposed by the natural configuration of the site prevailed until the rise of the new quarter after the fire of Nero, when the original orientation yielded to that of the south side of the Forum.

The Forum maintained, until a very late period, the general level established by the master-builders of the Golden Age, which the modern excavations have restored to us almost in its entirety. In the quarter towards the east, on the contrary, the natural conditions of its site and the almost entire absence of any great monumental structures during its earlier history, as well as its frequent devastation by fire, led to much diversity in level at different points at the various periods. It has been, therefore, impossible for modern excavators and scholars alike to adopt any one level which may serve as a fixed point of reference throughout the whole region. Two principal levels are, however, especially conspicuous, which may be used as such points of reference, or data, in the present discussion. The lower of these, which is that of Augustus, is most easily recognizable in the Sacra Via in its present form, which rises from 12.60 m. above sea level² at the fornix Fabianus,³ just north of the temple of Julius Caesar, to about 28.30 m. at its highest point 7 m. east of the arch of Titus. The second of these more important levels, though supported throughout a part of the region on lofty substructures a number of metres in height, lies immediately above that of Augustus below. This level, which is to be assigned, as will be seen later, to the period following the great fire of Nero, rose along its main axis, which is marked by the new Sacra Via, from 12.60 m. at the east end of the Forum, where it coincides with that of the preceding period, to 26 to 26.50 m. at the point of junction of the Sacra Via and the clivus Palatinus. Below these two levels, to which the larger number of the existing remains belong, some more fragmentary remains are or have been visible at two, if not three,

¹ For the conflict between these two forces in the Forum, see Van Deman, 'The Sullan Forum,' *J.R.S.* XI, p. 6.

² The levels here quoted have been reckoned from the data established by the School of Engineers of the University of Rome in their invaluable plan of the centre of the ancient city (*Media Pars Urbis*, Firenze, 1911). To avoid confusion the data used are those given on the plan itself without the correction of 14 cm. necessary to bring them into harmony with the later data of the Italian Geographical Institute, as stated in the *nota* accompanying the plan.

³ For the site of the fornix Fabianus, see Van Deman, *op. cit.* p. 27.

distinct elevations, representing as many or more periods in the history of the district, which correspond in general to the levels of the Forum of the same time.¹ A brief consideration of these earlier levels may be of assistance in the discussion of those of the later period with which we are here more immediately concerned.

Concerning the original configuration of the ground occupied later by the quarter to which the *Sacra Via* gave its name, but little direct evidence remains. It is usually held to have been a somewhat gradual slope extending along the northwestern side of the Palatine or, as more commonly represented in the maps of the ancient city, leading up to a small round summit close to but detached from that hill, which has been regarded as the ancient *Velia*, or *Veliae*. It is clear, however, from the ancient writers as well as from the existing remains that it was, rather, a somewhat elevated "saddle" between the Palatine and the hill opposite to it with the shallow depressions, or valleys, to the east and west of it, at the bottom of which flowed the earlier streams from the neighboring hills, the line of which is marked by the later sewers. Concerning the hill which forms the boundary on the south of the region, the Palatine, little difference of opinion prevails. The position and extent of the opposite hill and its relation to the region under discussion are, however, less well recognized. According to ancient writers,² especially Dionysius, from the beginning of the *Sacra Via* (*caput Sacrae Viae*) near the Colosseum to the vicinity of the modern church of S. Pietro in Vincoli, not far from but above the Forum³ as well as the Subura,⁴ ran a "somewhat high and steep ridge," or *λόφος*, "which the Romans called the *Velia*."⁵ On the heights of this ridge lay the *Carinae*,⁶ which formed, as it were, a natural rampart above the Subura.⁷ Since, as is clear from these and other ancient references, the name *Velia* must be applied only, as in the passage in Dionysius referred to above, to this ridge with its immediate slopes, it is evident that the *Sacra Via* and the region bearing its name did not lie within the limits of the *Velia*, from which it is carefully distinguished by Augustus,⁸ but below it, following the general line of the low valley between it and the Palatine.

The original elevation of the "saddle" between the two hills,

¹ For the levels of the Forum, see Van Deman, *op. cit.* p. 10.

² Dionysius, I, 67; V, 19. Varro, *Ling. Lat.* V, 48. For fuller references, see Jordan, *Top.* I, 2, pp. 416 f. and notes 131-134.

³ Dionysius, V, 19.

⁴ Varro, *Ling. Lat.* V, 48.

⁵ Dionysius, V, 19.

⁶ For the site of the *Carinae*, see Hülsen, *Top.* pp. 262 ff.

⁷ Varro, *loc. cit.*

⁸ *Res Gestae*, IV, 7.

the later summa Sacra Via, and of the valleys to the east and west of it can be but approximately determined at present. The level of the virgin earth at the lowest part of the Forum valley, which is but a short distance from the beginning of the Sacra Via, is 3.60 m. above sea level.¹ From this point, the valley, hemmed in by the abrupt sides of the hills on the north and south, rose originally by



FIGURE 4.—EARLY REMAINS NEAR THE ARCH OF TITUS.

an easier slope along the valley to the east. Less than a hundred metres from the valley below, at the northeastern corner of the temple of Antoninus and Faustina, virgin earth was found, in connection with the excavation of the *sepulcretum*, at 10.63 m.² Concerning the original level along the upper Sacra Via, no exact data have been reported. Along the earlier street leading to the Palatine, however, eleven metres east of the arch of Titus, a primitive grave consisting of a broken amphora was found in 1908 at

¹ For this level, see Van Deman, *op. cit.* p. 3.

² *Not. Scav.* 1902, p. 100.

about 28 m., as can be seen in the photograph here shown (Fig. 4). The original level of the ground can have been, therefore, but a little higher at this point, which is at almost the same level as the top of the "saddle" to the east of the arch. For the determination of the exact elevation of the natural terraces which rose on either side of the Sacra Via along the slopes of the Palatine and the Velia but few data are at present available. The level is, however, clear at the west end of the later atrium Vestae from the remains of the primitive grave found in 1902 referred to below, the top of which is at least 14.50 m. above sea level, while a little further east in the centre of the peristyle, the original *cappallaccio* was laid bare, a few years ago, at from 16 to 16.50 m. That the foot of the Palatine at this point lay further to the south originally than has been commonly held seems very probable for the following reason. In 1902 the remains of a *cappallaccio* pavement—which are still visible—were found in the rear of the republican atrium Vestae which seem to belong to the very early Nova Via.¹ We know from Cicero² that, between the Nova Via and the foot of the Palatine, there existed, from very ancient times, a grove connected with the cult of Vesta. It is evident that the foot of the Palatine must, at that period, have lain considerably further to the south than the line usually suggested, which coincides practically with that of the present Nova Via, since it is less than twenty metres from the remains of the earlier via just mentioned.

The sides of the rude paths representing the Sacra Via and the Nova Via as well, both of which lay outside the original city, were used by the earlier settlements on the neighboring hills as burial-places for their dead. Apart from the graves of the famous *sepulcretum* near the temple of Antoninus and Faustina, but one grave has been found along the course of the earliest road to the Palatine. This grave, which, as stated above, lay beside the *clivus Palatinus* near the arch of Titus, consisted, when found, of a half-amphora much broken by the later sewers near by. Beside the *cappallaccio* pavement in the rear of the atrium Vestae a similar grave was, as already stated, found in 1902, which must be assigned also to a very early time. During this early period, which is commonly held to have extended from the ninth to the sixth century B.C., little change occurred in the general features of the region, so far as can be at present determined.

¹ For this pavement, see Van Deman, *The Atrium Vestae*, p. 13 and pl. III, fig. 1.

² *de Divin.* I, 45.

The general line of direction of the primitive Sacra Via and of the upper Nova Via differed but little from that of the later republican streets.

For the establishment of a fixed level corresponding to that in the Forum at 10.60 to 10.90 m. above sea level,¹ the data at present available are very meager. That such a level existed is, however, rendered certain not only by the close connection between this district and the Forum below, but by the erection of a goodly number of monuments at the western end of it at the same general period as that to which the buildings in the Forum and Comitium at this level are to be assigned. But scanty remains of the various structures belonging to this period have, however, been brought to light, apart from a few broken pavements and sewers. Owing to the gradual filling in of the swampy valley below, the slope of the whole region towards the east became, at this time, much less steep, which is especially marked along the line of the Sacra Via. No data are accessible for the determination of the levels to the north of this street. The Nova Via to the south lay, as later, considerably higher, throughout its entire course, than the Sacra Via.

The orientation of the region as a whole remained, probably, unchanged. With the inclusion of the Forum and the Sacra Via in the pomerium and the rise of the regia and the buildings connected with it as a new religious centre for the enlarged city, the line of direction of the lower part of the Nova Via and possibly of the Sacra Via as well was, however, changed to conform to that of the new monuments, which, in accordance with the Etruscan ideas, were oriented with reference to the points of the compass.

The general plan of the region differed, probably, little from that of the following periods. Its boundary on the north is not clear. On the south, however, the district extended to the Nova Via or a little beyond. Towards the east no change seems to have occurred, but towards the west its extent was considerably lessened by the erection of the new group of buildings connected with the cult of Vesta. The Sacra Via and the Nova Via continued to form, as earlier, the main lines of communication between the Forum and the Palatine. No remains of the Sacra Via itself have so far been identified at this level. Along the *clivus Palatinus*, however, though no traces of a regular pavement have been discovered at this level, a thin stratum of hard-beaten earth was noted in 1908 which may have served as a *ruderatio* for one, if not for the pavement

¹ For this level, see Van Deman, 'The Sullan Forum,' *J.R.S.* XI, p. 4.

itself. A considerable portion exists also of a large sewer on either side of the line of this via. That on the east of the via, the course of which was at this point practically identical with that of the Augustan clivus, which is still visible, lies at 2.60 m. below the marble plinth of the arch of Titus, which is 30.41 m. above sea level. It was, as seen in 1908, at least 60 cm. high and 45 cm. wide and was made of thin *cappallaccio* slabs set on end. Several small sewers emptied into it from the east which belonged to the same period or that immediately following. The sewer on the west of the clivus, which was well preserved, resembled in general type and dimensions that just described. The material used was also *cappallaccio*. The site of the Nova Via is still not free from uncertainty. On the south side of the republican atrium Vestae, as has been said above, a considerable portion of a *cappallaccio* pavement still exists which is identical in type with those in the Forum at the corresponding level. While it seems almost certain that this pavement represents the Nova Via of this period, it is possible that it belonged to an open space adjoining the atrium and that the Nova Via lay a little further up the slope. No remains of any such street have, however, been found at this level.

Concerning the cross-streets by which the Sacra Via of this period was connected with the district to the north of it, but little is known. From the general character of the region, however, and its close relation to the market district centering, later, in and around the macellum, it is likely that several such streets existed from a very early time, though but one or, possibly, two are mentioned by ancient writers. It is probable that the street east of the basilica Aemilia already existed, though no remains have been found earlier than those of the period of Sulla.¹ Whether this street is to be identified with the Corneta, which lay between the Sacra Via and the macellum on the site of the temple of Peace, is wholly uncertain.² Since, between the temple of Antoninus and Faustina and the so-called temple of Romulus, the line of buildings along the Sacra Via at the lower as well as at the upper levels is continuous, no side-street can have existed at this point until a very much later time. On the east side of the temple of Romulus, however, an ancient street is still traceable, the remains of which are of the late republic or the early empire, but its rise may well be assigned, for the following reasons, to this period if not earlier. Not far from the Forum,

¹ For these remains, see Van Deman, *op. cit.* pp. 11 and 16.

² For this street, see Hülsen, *Top.* 1, n. 2.

according to a contemporary of Augustus,¹ ran a very old street which led to the heights of the Velia, known as "the street leading to the Carinae" (*τὴν ἐπὶ Καρρίνας φέρουσαν ὁδόν*), at the top of which lay the ancient temple of Tellus and at the lower end the no less famous shrine of the Penates. Since between the temple of Antoninus and Faustina and the summa Sacra Via the remains of no other cross street have been found, it seems clear that the street mentioned by Dionysius must have lain not far from if not on the exact line of the street under discussion. Concerning the course of the upper portion of this via, but little is known. It is certain, however, that the temple of Tellus lay a little to the northeast of the basilica of Maxentius and the street to the west of it, though its exact site has not been determined. For the lower part of the street and the temple of the Penates so closely connected with it, the evidence is, fortunately, more conclusive. Behind the so-called temple of Romulus is a small building of tufa blocks known commonly as the temple of the Sacred City,² which, apart from the late restorations in brick-faced concrete, is held to be wholly of the period of Vespasian. The existing remains of the earlier building are, however, of two periods, as can best be seen in the fine wall on the east facing the basilica of Maxentius. Toward the top and at the north end of this wall is an irregular line marking the extent of a fire by which the building was in part destroyed. Above and beyond this line a few courses of large peperino blocks are still left belonging to the restoration following this catastrophe which, from their original structural unity with the adjoining temple of Peace and their type of construction, belong clearly to the period of Vespasian. The lower portion of the wall, on the other hand, is built of finely cut blocks of Anio tufa laid in courses varying in height to conform to those of the fine travertine doorway in the centre, which forms a structural part of the building. This portion of the wall, which is necessarily earlier than that of the time of Vespasian resting upon it, must be assigned, from its materials and methods of construction, to the period of Augustus. As has been recognized for many years,³ on almost exactly this spot "not far from the Forum" and "on the slopes of the Velia" lay the very early temple of the Penates, which was rebuilt, according to his own statement,⁴ by Augustus. It seems clear, therefore, that, in the lower

¹ Dionysius, II, 67; VIII, 79.

² For a careful study of this building, see Phillip Barrows Whitehead, 'La chiesa dei SS. Cosma e Damiano,' *N. Bull. Arch. Crist.* 1913, pp. 143-165.

³ See Jordan, *Top.* I, 2, pp. 416 ff.

⁴ *Res Gestae*, IV, 7.

portions of this wall, we must recognize the remains of that famous temple in its later form. Since the temple faced—and still faces—east, it is no less clear that the street on that side of it, which in its orientation still agrees, except at its lower end, with the temple, is that which led to the Carinae. Inasmuch as the original temple of the Penates, so closely united to the nearby cult of Vesta and the regia, was built at the early period under discussion, if not previous to it, the via upon which it lay may safely be assigned to the same time. On the south side of the Sacra Via, no cross streets have so far been identified at this level.

No certain remains have as yet been discovered of the various private houses and lines of shops for which the region was even at this time especially noted, except a network of small sewers along the north side of the Sacra Via between the temple of Antoninus and Faustina and that of Romulus,¹ which, since they are cut by the later sewer of the Sullan time, may be referred to this general period. Under the east end of the imperial atrium Vestae, however, not far from the earlier line of the Nova Via, the remains of a primitive altar have been found the upper portions of which, when discovered, were composed of sacrificial ashes.² While no certain proofs have been found so far, it seems probable that this altar is to be identified with that of Aius Locutius, which still existed in the time of Cicero.³

Under the arch at the east end of the Forum and the temple of Julius Caesar, the remains are still visible of a street at 11.90 m. above sea level belonging to the time of Sulla.⁴ Rising from this street along the slopes on either side of the Sacra Via, by which, as earlier, the whole district was bound together, considerable remains have very recently been identified also of various structures which, from their level and general plan as well as their type of construction, must be assigned to the same period. Of these remains, which have been as yet but partly classified, the most important consist of a large number of small rooms or shops which form an almost unbroken line along the south side of the infima Sacra Via, with the less abundant remains of a corresponding row on the opposite side of the street. Of the walls of these rooms, all of which were restored or entirely replaced in the following period of Augustus, the foun-

¹ *Not. Scav.* 1902, p. 96.

² For the condition of this altar, when first found, see Van Deman, *The Atrium Vestae*, p. 19 and n. 1, and pl. IV, fig. 2. The upper part of the altar has now disappeared.

³ *de Divin.* I, 45, 101.

⁴ For this street, see Van Deman, 'The Sullan Forum,' *J.R.S.* XI, p. 12.

dations only are, as a rule, traceable. They consist throughout of roughly cut blocks of the grayish yellow tufa so common at this period in the Forum.¹ The pavement of a considerable number of the rooms, which is made of thick slabs of Monte Verde tufa,² is still preserved, as well as the tufa curbs of the wells which seem to appear regularly inside of each of them. The remains of the monotonous line of shops on the north side of the Sacra Via are broken by a group of six rooms on either side of a corridor, which was discovered in 1903.³ These rooms, which are still visible to the east of the *sepulcretum*, are most probably the cellars or basement rooms of shops or private houses above them. Towards the top of the Sacra Via, below the pavement of the later *horrea*, a lithostraton pavement⁴ also was found in 1905⁵ belonging, it is probable, to a private house of the period. On the opposite side of the Via, across from the west end of the basilica of Maxentius, a similar but smaller group of rooms was found, resembling the basement shops of Pompeii, to which a flight of steps led down from the street above.⁶ The construction in general is that of the late republic and the walls of the rooms are faced with quasi-reticulate of the Sullan type.⁷ A few remains of the shops opening upon the street to the east of the basilica Aemilia at this time have also been found in the course of the modern excavations. On the north of the Sacra Via no remains of the period have as yet been identified beyond those just mentioned. Between the Sacra Via and the Nova Via, many scattered remains belonging to this time are still traceable, especially in and near the precinct of Vesta, which will be discussed at a later time.

The remains of the Sacra Via itself are very scanty. The most important of these are a few blocks of an earlier pavement below the steps at the east end of the temple of Julius Caesar at 12.50 m. above sea level, which, as is clear from their level and relation to the remains immediately above them, belong to this period. To the west of the arch of Titus also, immediately below the well-preserved pavement of the Augustan period, a small but fine piece of the clivus Palatinus of this time was brought to light, a few years ago, a little

¹ For the use of this tufa in the Forum, see Van Deman, *op. cit.* p. 12.

² For this variety of tufa, see Frank, *A.J.A.* XXII, 1918, pp. 182, 187, *et al.*

³ For the appearance of these rooms at the time of their discovery, see *Röm. Mit.* 1905, p. 116, fig. 52.

⁴ For this type of pavement and the period of its use, see Van Deman, *op. cit.* p. 29.

⁵ *Cl.R.* 1905, p. 76.

⁶ *Not. Scav.* 1889, p. 266. *B. Com. Rom.* 1903, p. 27.

⁷ For the Sullan type of construction, see Van Deman, *A.J.A.* XVI, 1912, pp. 246 f.

over 29 m. above sea level, beside which was a broad sewer, the sides of which are of thick slabs of Monte Verde tufa set on edge.¹ No remains of the other streets of the period have been identified, except a few uncertain remains of that which lies to the east of the so-called temple of Romulus.

The general level of the new quarter is in harmony with that of the Forum of the Sullan period,² to which it was closely united, while in slope it differed little, so far as can be determined, from that of the period immediately following. The elevation of the street by which the region of the Sacra Via was separated from the Forum towards the west was 11.90 m. above sea level. Rising gradually from this level, a few blocks of the original pavement of the Sacra Via have very recently been identified, as has been noted above, at the north-east corner of the temple of Julius Caesar at 12.50 m., while the level of the Via in front of the temple of Romulus is not much above 14 m. above sea level, as shown by the pavement of the shops opening upon it. At its point of junction with the *clivus Palatinus*, it is probable that the street did not rise much above 27 m., since the level of the pavement of the following period is 27.60 m. The level of the portion of the district lying between the Sacra Via and the Nova Via, as of the Nova Via itself, has not been determined. It is, however, probable that the Nova Via was raised to a higher level, towards the west, than earlier, since the ramp to the Palatine belonging to this period³ led up to it from a lower level.

Owing to the limited data at our command, but little is known, at present, of the exact extent of the new quarter at this level. It is probable, however, that it differed only slightly from that of the following period. The general course of the Sacra Via and of the *clivus Palatinus* as well remained unchanged. Concerning the street to the south of the *regia*, the evidence which follows is fortunately conclusive. In front of the *regia* towards the east, a small triangular area is still traceable, along the south side of which lay a row of small rooms or shops similar to those along the Sacra Via to the east. Since the first of these rooms, immediately adjoining the *regia*, extends across the line of this street, it is clear that the street did not exist at this period. While no remains have been found so far of the Nova Via itself, it is certain that it shared in the general restorations from its inclusion in a list of streets mentioned in an inscription concerning street repairs.⁴ Of the side streets on the

¹ For this sewer, see p. 391, Fig. 4.

² For the Sullan Forum, see Van Deman, 'The Sullan Forum,' *J.R.S.* XI, pp. 1 ff.

³ For this ramp, see *op. cit.* pp. 17 f.

⁴ *Not. Scav.* 1899, pp. 265-66.

north, that east of the basilica Aemilia lay a trifle further to the west than later, as is shown by the remains of a row of rooms below the present street.¹ It is clear from the remains that the street to the east of the so-called temple of Romulus underwent a certain amount of restoration though it maintained its earlier course. No traces have been as yet found of any cross streets connecting the Sacra Via and the Nova Via, though the existence of one or more is rendered practically certain from references in ancient writers. The ramp west of the atrium Vestae, which formed a shorter means of communication with the northwest portion of the Palatine was, possibly, first built at this period.

The few monumetal structures of the period belonging to the district, apart from those connected with the regia and the cult of Vesta, show no traces of restoration.

Concerning the date to be assigned to the rebuilding of the region at the new level, little need be said, since it is not only closely united to, but practically a continuation of, the new Forum which arose at the time of Sulla.² That it is to be assigned to that period is rendered more certain, also, by the relation of the remains at this level to those of the Augustan period immediately above them, as well as by the materials and methods of construction, which are those of the time of Sulla.

No remains have been as yet found—or at least identified—of any structures built or restored by Julius Caesar in this region, though his work in the Forum is not lacking in importance,³ unless it be a few broken walls above the Nova Via, which are faced with reticulate of a type seemingly earlier than that of Augustus.

A little above, but plainly distinct, from the remains of the Sullan period just described, an extensive restoration of the whole region is clearly recognizable which corresponds in level and orientation to that of the Forum of the Augustan period.⁴ The remains at this level, which, for the Sacra Via proper and its immediate vicinity, is the present level, differ little in general character from those of the preceding period. Along the lower part of the Sacra Via and the clivus Palatinus, they consist, in the main, (1) of small rooms or shops on either side of these streets identical in plan with those just below them, which they replaced, and (2) of private houses in the rear of these shops which are, at least in part, of a semi-official character.

¹ For these rooms, see Van Deman, *op. cit.* p. 30.

² For this Forum, see Van Deman, *op. cit.* p. 30.

³ For the work of Julius Caesar in the Forum, see Van Deman, *op. cit.* p. 9.

⁴ See Van Deman, *op. cit.* p. 2.

In construction, however, these buildings differ markedly from those of the Sullan period at the lower level. The foundations both of the shops and of the houses, so far as at present classified, are wholly of concrete of the Augustan type.¹ The walls of the shops resting on these foundations are of Anio tufa, into which are set at certain points blocks of travertine, while the walls of the houses behind them are in great part of concrete faced with tufa reticulate or broken roof-tiles of the Augustan type. Along the upper Sacra Via, the simple line of shops is replaced on the north and partially at least on the south² by a group of structures which resembles in plan the ancient *horrea*, or bazaars, consisting of a number of small rectangular rooms arranged in rows on either side of a common back wall with broad open passageways or courts between the rows. The walls of these rooms are faced in part with reticulate and in part with broken roof-tiles, which belong, however, clearly to the same general period, since the body of the walls is identical in character throughout. The passageways are covered with herring-bone pavement of an early type. The original pavement of the Sacra Via has been in great part preserved and consists of *selce* blocks of irregular shape but carefully fitted together. These blocks are often of immense size, measuring at times from two to two and a half metres in their greatest diameter and a metre or more in height. Extensive remains also exist of the *clivus Palatinus*, including a great part of the original pavement with the sidewalks, or *crepidones*, of travertine on either side. Along the lower part of its course, the general line of direction of the *clivus*, which is almost perpendicular to that of the Sacra Via is northeast to southwest, but somewhat less than halfway to the front of the *domus Flavia* it diverges slightly to the east. A little beyond this point, the remains have been found of a monumental arch with but one opening, which, from its level, orientation and relation to adjoining monuments, must be assigned to the same general period as the street which it spans. The type of construction, as shown most clearly in the mass of concrete in which the stone foundations of the arch were set, is also of the Augustan time. But few certain traces have been found of the Nova Via of this time. Of the less important streets of the district also, scanty remains are left, though their general course is clear.

At the east end of the Forum, the level of the Augustan period, which coincides with that of Julius Caesar, is 12.60 m. above sea

¹ See Van Deman, *A.J.A.* XVI, 1912, pp. 391 f.

² For the remains of these structures on the south of the Sacra Via, see p. 385, Fig. 2.

level. From this level, which is 70 cm. above that of the Sullan period below, the new district rose along its main axis, represented by the line of the Sacra Via, to 28.30 m. above sea level at the highest point now traceable, 7 m. east of the arch of Titus, while the level of the summa Nova Via at its point of junction with the clivus Palatinus was about two metres higher. The slope along the line of the Sacra Via is much less steep than in the early period, owing to the gradual filling in of the Forum valley below. At the lower part of its course, between the regia and the street leading to the Carinae, it is but 2.75 cm. to a metre, while beyond this point it increases rapidly to 6.25 cm. rising to 8.75 cm. at a short distance from the top.

Though it is certain that the structures to the north of the Sacra Via lay somewhat higher than the earlier ones, but few data are at present available. The buildings between the Sacra Via and the Nova Via, with a few exceptions, as well as the Nova Via itself, were also considerably raised at this time, as can be seen from the existing remains.

The orientation of the region was in general the same as in the preceding period.

Throughout this period, the region maintained its traditional character as a quarter of shops and private houses. Its general plan remained, therefore, unchanged. The Sacra Via and its continuation, the clivus Palatinus, retained their earlier courses. The Nova Via seems at this time to have been pushed a little further to the south, unless, as suggested above, this had already been done in the previous period. The line of the street adjoining the basilica Aemilia also was moved a trifle further to the east owing to the erection at this time of the porticus of Gaius and Lucius.¹ The street in front of the temple of the Penates suffered, seemingly, little change, though the temple itself was, as we have seen above, entirely rebuilt.

In connection with the raising of the general level of the district, the earlier sewer of cut stone below the Sacra Via was restored in concrete faced with reticulate.²

No traces have as yet been found of any new public buildings erected at this level. The older monuments, however, especially the temples and other religious structures were rebuilt with a splendor not unworthy of comparison with that of the neighboring Forum. Of these monuments the most illustrious were the regia—belonging

¹ For this porticus, see Van Deman, *A.J.A.* XVII, 1913, pp. 14-28.

² *Not. Scav.* 1899, pp. 78, 265; *Cl.R.* 1899, pp. 186, 322.

rather, however, to the Forum than to the Sacra Via—which was built wholly of blocks of Luna marble, with the neighboring temple of Vesta, the more modest temple of the Penates on the Velia, and the shrine of the Lares on the summa Sacra Via, no traces of which have as yet been identified.

Although the period to which the rebuilding of the whole region is to be assigned is clear, the exact date is uncertain. It seems likely, however, that these changes accompanied or followed shortly after the establishment of the new level at the east end of the Forum which marked the completion of the regia in 36 B.C. and the dedication of the temple of Julius Caesar in 29 B.C. In 12 B.C. a destructive fire swept over the region from the northwest, from which many of the buildings on the north of the Sacra Via suffered greatly, especially the temple of the Penates, which was seemingly burned to the ground, since it was entirely rebuilt by Augustus, according to his own statement.¹ The line of shops further to the east were also much injured. Of the greater public buildings on the south of the street the regia alone escaped unscathed, though the atrium Vestae, if one may judge from the remains, was not wholly destroyed. Concerning the temple of Vesta, the evidence is not clear, but the domus Publica was burned, as was shown, in the excavations of 1882, by the extensive traces of fire.² The temple of the Lares on the summa Sacra Via also was destroyed,³ though the shops suffered less injury than those on the opposite side of the Via. While no general rebuilding of the region followed the catastrophe, the temples were rebuilt, as stated above, and the other buildings restored, while the domus Publica was added to the atrium Vestae.

At a number of points near the junction of the Nova Via with the clivus Palatinus of this period, considerable remains have been found of walls which from their relation to the adjoining buildings and their type of construction cannot be referred to any period earlier than that of Nero. Since it is clear from their level and orientation, as well as from their structural independence, that they did not form a part of the later domus Aurea, they must be accepted as belonging to its predecessor, the domus Transitoria, the site of which stretched from the middle of the Palatine, where extensive remains of it have, in recent years, been brought to light below those of the domus Aurea, to the Esquiline on the north.

¹ *Res Gestae*, IV, 7; *aedem Larum in summa Sacra Via, aedem Penatium in Velia . . . feci*.

² For the traces of fire, see Jordan, *Top.* I, 2, p. 285 and n. 115.

³ See above.

Scarcely had the last touches been given to this earlier and but little less beautiful palace of Nero, when it, with the whole region of the Sacra Via, was swept over by the fiery wave of destruction which engulfed the greater part of the city in 64 A.D. With this fire the first chapter of the structural history of the Sacra Via comes to an end. Its narrow, winding streets with their reminders of a thousand years were abandoned and its historic houses and shops lay buried beneath feet of broken walls and earth—to be restored to the light again only after almost two thousand years. Out of the ruins there arose, phoenixlike, a more splendid group of structures at a new level and with a new orientation, the general plan of which is still clear, though the walls themselves are much broken and, in certain parts, destroyed by the following centuries of restoration. With its buried walls and vanished streets, the old-time character of the region also disappeared and the thronging quarter of the people was replaced by stately arcades and spacious halls forming but an architectural link between the Augustan Forum below and the oriental splendors of the entrance court of the great palace above, with the golden statue of its builder towering over it all.

In the structural palimpsest revealed by the spade of the excavator which we are here considering, the writing of the earlier times, as has been shown briefly above, appears too often in blurred and broken lines. Owing to its more abundant remains, the work of the later period with which we are most nearly concerned is, however, more easily traced, though concealed in many places by that of later restorers. Of the remains more commonly recognized as belonging to this period, apart from those of the atrium Vestae, which have been discussed elsewhere,¹ the most important are the following: (1) the foundation walls and travertine bases upon which rested the colonnade, or better, arcade,² on the north of the Atrium Vestae with the row of small rooms in its rear; (2) the two massive foundations of concrete belonging to the arcade in front of and parallel to the basilica of Maxentius; (3) a number of rows of small, square concrete foundations, several of which can be seen in the accompanying illustration (Fig. 5), on which rested the pillars supporting the broad porticus in the rear of the arcade, extending from the atrium Vestae to the arch of Titus; and (4) a few broken travertine bases in the rear of the basilica of Maxentius. In addition to these better known remains, a number of others have been found or identified during

¹ *The Atrium Vestae*, pp. 15-20.

² For the various structures here referred to, see PLATE III.

more recent years between the earlier atrium and the arch of Titus, as well as an extensive structure, or, better, group of structures, on the north of the Sacra Via corresponding in general extent and plans to that on the opposite side of the Via. The most conspicuous of these remains are (1) the retaining walls of unfaced concrete supporting the terrace on which lay the later Nova Via and



FIGURE 5.—CONCRETE FOUNDATIONS OF THE SOUTH PORTICUS.

that immediately above it, with a number of cross-walls belonging to the row of rooms on the south of the same street; (2) the massive concrete foundations of the lofty arcade on the north of the Sacra Via, extending originally from the via on the east of the basilica Aemilia to the summa Sacra Via, with a considerable number of the travertine bases on which rested the pillars forming the arcade; (3) a number of bases also of the pillars supporting the porticus behind this arcade, corresponding to that on the other side of the Via;

and (4) a very few but important remains of the pavement of the *Sacra Via* itself.

The elevation of the new quarter as a whole differed greatly from that of the previous period, being raised in general from one to three metres, though at a few points attaining the height of almost a dozen metres above the earlier buildings (Fig. 6). In the steepness

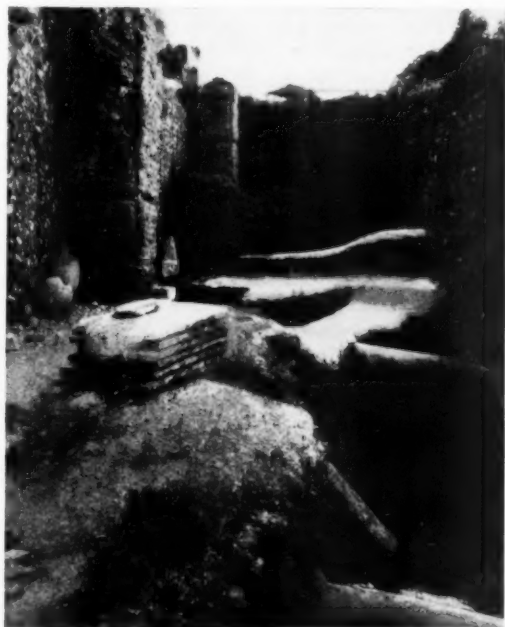


FIGURE 6.—FOUNDATION WALLS OF THE ARCADE ON THE WEST OF THE CLIVUS PALATINUS.

of its slope towards the east also, it shows a marked change, resembling not a little the gradient of the early times. The level of the east end of the Forum, which had escaped unscathed from the fiery wave of destruction of 64 A.D., remained, as in the last period, 12.60 to 12.70 m. above sea level. The lower part of the new *Sacra Via*, which had been transformed into a monumental avenue of approach to the lordly palace above, the *domus Aurea*, with the street forming the boundary of the region along the east front of the

basilica Aemilia, retained, it is likely, the same level, though no remains of the Via itself remain at this point. Almost a hundred metres to the east under the front of one of the small rooms belonging to the so-called temple of Romulus, the line of which coincides almost exactly with that of the front of the sidewalk beside the Sacra Via of this period (see PLATE III), a small piece of *selce* pavement has been preserved at 16.70 to 16.80 m. above sea level; which belongs almost certainly to the Via of this period. The level in front of the Constantinian porch on the south of the basilica of Maxentius, where a fine piece of pavement remains (see Fig. 7), is from about 22.50 to 23.10 m. high. The exact level beyond this point is not known, since no remains of the street exist. At the point of junction with the clivus Palatinus it was, however, not more than 26 to 26.50 m. above sea level. The level of the Nova Via towards the west is not clear. From the cross street behind the atrium Vestae, where its level is about 23.40 m., it rises to 32.30 m. at its junction with the clivus Palatinus. The arcades on either side of the Sacra Via, which were reached by a short flight of steps, lay from 2.20 to 2.80 m. higher than the street below. The exact level of the lower portion of that on the north is not known. A little over twenty metres to the east of the temple of Antoninus and Faustina, however, where the first remains of the superstructure are found, it differs but little in elevation from the arcade on the south side of the Via. At the west side of the via to the Carinae, its level was 19.40 to 19.50 m., while, on the opposite side, it lay almost a metre higher. Concerning the level beyond this point no data are at present accessible. The arcade on the south rose from about 15 m. at its beginning near the temple of Vesta by an easy gradient to the cross street opposite the via to the Carinae, where its level was, like that of the arcade on the north, 19.40 to 19.50 m. above sea level. Beyond this street it resumed its course at from 20.20 to 20.30 m., attaining at its highest point, the junction of the Sacra Via and the clivus Palatinus, about 28.30 to 28.40 m. Concerning the level of the porticus on the north of the Sacra Via, but few data are accessible. It is probable, however, that it differed little from that of the porticus on the south. This porticus, which extended, as has been said, from the atrium Vestae to the clivus Palatinus on the east, rose by a succession of level areas, or artificial platforms, of uncertain width, which conformed in general to the slope of the arcade in front.

The region as a whole shows a new and consistent orientation (see PLATE III). The lower portion of it, towards the west, how-

ever, while conforming in its main lines to the new plan, remained unchanged in certain special cases. The regia and the temple of Vesta on the south, which, so far as can be determined at present, were left untouched by the fire, retained their earlier religious orientation, although in the case of the regia this had been slightly modified at an earlier time to agree with the line of the Sacra Via on the north. The atrium Vestae, on the other hand, to which the domus Publica had been added after the fire of 12 B.C., was included in the general plan and rebuilt on the new orientation, with the exception of the west wall, which continued to follow the line of the earlier ramp to the Palatine. The temple of the Penates on the lower slopes of the Velia opposite, with, it is possible, some other monuments near it, retained, like the regia, its original orientation. The via to the Carinae, on which it lay, with the shops beside it, agreed with the new orientation in its lower course. In front of and beyond the temple, it conformed to the line of direction of the temple—a line of direction fixed for all future time by the erection in the next period of the magnificent temple of Peace. The upper portion of the district, as well as the entire course of the new Sacra Via with the lofty arcades on either side of it and the Nova Via, were made to conform in their orientation to that of the great monuments along the south side of the Forum, though certain structures not far from the northeast corner of the basilica of Maxentius are shown on the plans¹ as retaining the older line of direction. The clivus Palatinus, also, the course of which lay at right angles to the Sacra Via, maintained the same orientation throughout its whole course, influenced doubtless by the orientation of the magnificent palace in the centre of the Palatine to which it led. In the great vestibulum and the adjacent portions of the domus Aurea on the slope to the east of the summa Sacra Via, the same orientation prevailed until the time of Hadrian, when the axis of the great temple of Venus and Roma, which rose on this spot, was made to coincide with the major axis of the Colosseum, though the Arch of Titus retained the earlier line.

In general extent, the district differed but little from that of the previous periods, including, as earlier, the region between the upper slopes of the Velia and the Nova Via to the north and south and the clivus Palatinus and the Forum on the east and west. Owing to the establishment of the new orientation and general plan, the exact limits of the district were, however, it is probable, much changed,

¹ *Media Pars Urbis*, pl. 2. Lanciani, *Forma Urbis*, pl. 29.

especially on the north and south. On the north the presence of the later monumental structures and the lack of systematic excavation make it impossible to establish any exact boundary. It is clear, however, from the remains west of the via to the Carinae that the arcade which existed further to the east along the *Sacra Via* extended also along this part of its course. No traces have been found, however, of any buildings of the period in the rear of this arcade. The northern limit of the district to the east of the via leading to the Carinae is no less uncertain, since, according to a plan made by eye-witnesses of the remains brought to light in the sixteenth century,¹ the group of structures below the basilica of Maxentius continues without interruption, though probably at a higher level, considerably further to the north than now traceable. On the south the *Nova Via*, though on a somewhat different line, formed, as earlier, the limit of the district. The new quarter, in its narrower sense, was bounded on the east by the *clivus Palatinus* on the side towards the Palatine. Owing to the presence of remains belonging seemingly to this period, immediately to the east of the basilica of Maxentius, the fixing of a definitive line between the porticus on the north of the *Sacra Via* and the front of the *domus Aurea* is not, at present, possible. Though the district on the west reached technically to the Forum, the group of buildings associated with the *regia* and the cult of Vesta were more commonly held to belong to the Forum, with the exception of the *domus Publica*, which was spoken of as lying on the *Sacra Via*.

The general plan of the new district was simple (see PLATE III), forming a part merely of the greater scheme, which included this whole part of the city. On the artificial terraces which had been built up along the slopes of the Palatine and the Velia opposite, long straight lines of structures were erected rising one behind another on either side of the new *Sacra Via* (see PLATE IV, Sections A-A and B-B). This double group of structures, forming a regular rectangle except for its western end, was divided roughly into two smaller rectangular groups on either side of the via by wide cross streets, the beginning of which was marked probably by lofty monumental arches. These streets, which together form the minor axis of the new quarter, conformed to the new orientation, as has been already said, except along the upper part of that on the north, the via to the Carinae. The western portion of the region as a whole, owing to the presence of its important religious monuments, agreed

¹ *Mél. Arch. Hist.* XI, pp. 161-167 and pls. III-IV.

only in part with the lines of the new plan. On the north of the Sacra Via but few remains are now traceable. While, as is plain from the concrete foundations still remaining, the new arcade along this side of the Via was prolonged to the western end of the district, the temple of the Penates behind it and possibly some other monuments in its vicinity were left untouched. From the remains of the shops along the via to the Carinae beyond the temple, it is possible, however, that this portion of the region was partly rebuilt in conformity to the general plan. The regia on the south shows no signs of reconstruction at this time, while the temple of Vesta, which was completely destroyed by the fire, seems not to have been restored until a later time. The atrium Vestae, on the other hand, was wholly rebuilt, at this period, and incorporated in the new scheme, with the Nova Via in its rear. The eastern portion of the district, owing to the private character of the buildings and the almost entire absence of monumental structures, offered less hindrance to the imperial architects in their systemization of the new quarter. The rectangular spaces on either side of this part of the Sacra Via were covered with vast open halls, or *portici*, which extended from the slopes of the Velia behind the later basilica of Maxentius to the terrace supporting the Nova Via. These open halls were united with the less regular structures towards the west by lofty arcades along their front, which joined the whole region also with that lying between the Nova Via and the great palaces in the centre of the Palatine.

Of the greater streets, which served not only as the boundaries but also the framework of the new region, the remains are fragmentary. Their general course and construction are, however, clear. The Sacra Via, which formed not only the centre but the main axis of the district, extended in a straight line from its entrance into the Forum at the fornix Fabianus, north of the temple of Julius Caesar, to the vestibulum of the domus Aurea, which occupied the entire width of the earlier saddle between the two hills, with the exception of the small space on which stood the age-old temple of Jupiter Stator. The elevation of the Via towards the west, at its entrance into the Forum, was, as has been said above, 12.60 to 12.70 m. above sea level. From this level it rose very gradually for about 85 m. to the two cross streets to the north and south, where it was not far from 17 m. high. Beyond this point it rose much more rapidly for almost 60 m. to the portico in front of the basilica of Maxentius, where its level was from 22.50 to 23 m. (see PLATE IV,

Section B-B), while at its point of junction with the *clivus Palatinus* it was from 26 to 26.50 m. above sea level. Along the lower part of the *Via* its slope was not above 5 cm. to the metre. Further to the east, however, it increased rapidly to not less than 8 cm. to a metre, while the upper part of its course shows a general gradient of not far from 7 to 8 cm. to the metre, so far as can be determined from the existing remains. Owing to the presence of the *regia* on the south, the *Via* was little if any wider in the lower part of its course than in the Augustan period. Beyond the small area in front of the *regia*, however, the street assumed its true proportions, being 29.50 to 30 m., that is 100 Roman feet, in width from building to building. Although the remains of the *Via* proper are very fragmentary in general, it is clear that it consisted originally (1) of a wide space paved with *selce* with one or two steps on either side of it leading up to (2) a broad sidewalk, or *crepido*, from which, in their turn, three or four steps led to the lofty arcades above. But two or possibly three small pieces of the pavement have been so far identified. The first of these consists of two fine polygonal blocks of *selce* of medium size at 16.70 to 16.80 m. above sea level, under the doorway to the small room on the east belonging to the temple of Romulus. Sixty metres further to the east in front of the porch of the basilica of Maxentius, a considerable stretch of the same pavement, 8 metres long and a little more than 2 metres wide, has been preserved, which rests immediately upon the walls of the shops of the preceding period, as can be seen in the accompanying illustration (Fig. 7.) The blocks of this pavement are more regular in shape and much smaller than those of the Augustan *Via*.¹ They measure normally not more than 70 to 80 cm. in their largest diameter and are but 45 to 50 cm. high. They seem well cut and show but little sign of use. On either side of this paved space, two steps or, in the upper part of the *Via*, one step led up to a wide sidewalk, or *crepido*, for pedestrians, which, including the steps to the arcade above, was about 5 m. wide. Its exact height above the pavement of the street is not certain, since no remains of its pavement have survived *in situ*. That it cannot have lain less than 60 cm. and, further to the east, 30 cm. above the *Via* is clear from the height of the fragmentary walls of the earlier period on which it rested. Its general level as well as its existence is rendered more certain not only by these walls but more especially by the remains of a series of small rooms lying 60 to 80 cm. above the street on the artificial platform formed by them, the

¹ For the pavement of the Augustan period, see p. 400.

front of which coincides with that of the *crepido*, and by the survival *in situ* of the bases of a number of honorary statues, which form a row along the edge of the earlier sidewalk. On the north the front line of the temple of Romulus and of the porch on the south of the basilica of Maxentius coincides in a similar manner with that of the earlier walk.

At a short distance from the top of the new Sacra Via in front of the vestibulum of the domus Aurea, the clivus Palatinus, diverged,



FIGURE 7.—THE NERONIAN PAVEMENT OF THE SACRA VIA.

as earlier, towards the south. The new clivus, flanked on one side by the lofty arcade and on the other by the no less stately front of the Golden House, rose in an unbroken line to the area before the great palace of Nero in the centre of the Palatine, the broken walls of which are still in part visible below those of the following period. No remains of the clivus proper have been so far identified in the lower part of its course, with which alone we are here concerned. Its general line, which lay at right angles to that of the Sacra Via, and its limit on the west are, however, plain. Its exact elevation is not certain, since no remains of its pavement have been preserved. Its

level at its point of divergence from the Sacra Via was, however, not more than 26 to 26.50 m. above sea level, from which point it rose to about 31.75 m. at its junction with the Nova Via. Its width is somewhat less than that of the Sacra Via below, since the distance from the arcade along its west side to the front of the domus Aurea cannot have much exceeded twenty metres. From the remains which are left, it is certain that the clivus consisted, like the Sacra Via, of which it is but a continuation, of a paved space in the middle with a broad sidewalk, or *margo*, on one, if not on both sides. From this walk, a short flight of steps led, on the west, to the arcade above, while on the east rose the more magnificent approach to the Golden House.

Whether there existed an open space or avenue on the north between the porticus and the front of the domus Aurea corresponding to the clivus Palatinus opposite cannot at present be determined. If the structures of which remains have been reported at various times¹ under the platform of the temple of Venus and Roma are, as seems clear from the old plan published by Hülsen,² a continuation of the porticus destroyed by the basilica of Maxentius, the existence of such a street at this period is impossible. In the absence of more definite data, no conclusion can at present be reached.

Of the Nova Via, the younger companion of the Sacra Via through its many vicissitudes, but few remains of the period are left. Its course as well as its general level are, however, clear from the buildings on either side of it, though its beginning towards the west and its connection with the Forum are at present uncertain. Behind and below the sacellum Juturnae a travertine base has recently been noted which is not only identical in type with the large travertine bases for which the whole district is so notably conspicuous, but is in line with those along the north side of the Nova Via further to the east (see PLATE III). Inasmuch as it differs radically in orientation from the buildings near to and above it, it seems at least possible that it marks a continuation of the Nova Via towards the west and its connection with the Forum by a monumental flight of steps, as well as by the earlier ramp between the precincts of Vesta and Juturna, which was restored at this time. Since no traces of the via proper have been identified towards the west, the elevation cannot at present be determined. Opposite the line of the cross street of the period behind the atrium Vestae,³ however, its level was proba-

¹ Lanciani, *Ruins and Excavations*, pp. 74, 195. Hülsen, *Drit. Jahresb. über d. Top. d. Stadt Rom. ap. Durm. Baukunst d. Etr. und Röm.* p. 626, fig. 707.

² *Op. cit.*

³ For this street, see p. 415.

bly about 23.60 m. About 58 m. towards the east, its present level is 28.60 m.,¹ while at the point of junction with the *clivus Palatinus*, it is about 31.75 m. In the upper part of its course, its slope conforms closely to that of the *Sacra Via* below it. The general change in orientation of the whole district is clearly marked in the upper part of the *Nova Via* by the remains of a few of the earlier retaining walls on both sides of it, which maintain their earlier line of direc-



FIGURE 8.—SIDEWALK ON THE NORTH OF THE NOVA VIA.

tion.² A considerable tract of pavement of the upper *Nova Via* has been preserved. These remains, although at the level of the period under discussion, seem, from their type, to point to a reuse of old material or, possibly, a later restoration. On either side of the new *Nova Via* was a low raised walk, or *crepido*, of travertine about 1.35 m. wide and 40 cm. high, a small portion of which still exists (Fig. 8). Behind and above this *crepido*, the remains are still left on both sides of the street of a row of massive travertine bases, on which rested a series of large square piers supporting a lofty façade not unworthy

¹ See PLATE IV, Section B-B.

² See PLATE III, the wall in red south of the *Nova Via*, for one of these walls.

of comparison with that on either side of the Sacra Via. While in form and general proportions resembling the piers of the latter more famous arcade, the pillars on both sides of the Nova Via are somewhat smaller, measuring but 1.18 to 1.20 m. \times 1.35 m. In the rear of this façade on the south was a line of small rectangular rooms or shops. The remains of these rooms along the upper Nova Via, which were replaced later by others differing somewhat in size, as will be shown in a later paper, consisted, in large part, of foundations for the cross walls with a portion of a brick-faced concrete wall in their rear. Towards the west the unfaced retaining wall of the terrace above alone remains. That a similar row of rooms or shops also existed, at least in the original plan of the district, on the opposite side of the street is probable, though the fine walls now visible are wholly of a later period. Below this line of rooms, there existed, at least in the later period, a corresponding row at the lower level, opening probably upon an open passageway or street, as is suggested by the large size of the travertine bases for a line of piers in front of them.

The via to the east of the basilica Aemilia seems to have suffered no change at this period.

The via to the Carinae, on the other hand, was largely rebuilt in conformity to the new level while, in the lower part of its course, the new orientation, differed little, if any, from that of the previous period. The level of this street at its point of junction with the Sacra Via was about 17 m., since it lay at least 2.50 m. below the arcade above, which, as will be shown later, was about 19.40–19.50 m. above sea level. From this point it rose by an easy gradient to the front of the temple of the Penates where its level was, it seems clear, not more than a metre higher. In its lower course the via conformed to the general orientation of the new district. A short distance to the north of the arcade, however, not far from, if not exactly opposite, the south wall of the temple of the Penates, this line yielded place to that of the adjoining temple, as is clear from the remains of a travertine base and of a brick-faced concrete wall attached to it on top of which was built the apse of the basilica of Maxentius, both of which show the original orientation.¹ Of the via itself a considerable number of paving blocks still remain, which seem, from their position and type, to belong to an earlier period. The width of the street was 7.40 to 7.50 m. On either side near its junction with the Sacra Via, four massive bases of travertine are traceable, which

¹ See PLATE III; cf. Lanciani, *Forma Urbis* tav. 29.

supported, it is probable, a monumental arch marking the entrance to the via.

On the south side of the Sacra Via and directly opposite to that just described, lay a corresponding broad street or passageway, the site of which was occupied later by the groups of rooms forming the eastern end of the atrium Vestae of the period of Hadrian.¹ This street, unlike that on the north, was not a main artery of the city's life, but merely a secondary street uniting the Sacra Via and the Nova Via. Its level at its beginning, like that of the via opposite, was about 17 m. above sea level. Owing to the existence of the later buildings above it, no data are obtainable concerning its elevation further to the south. It is probable, however, that, like the narrow street which replaced it behind the later atrium Vestae,² it was connected at its southern end with the Nova Via above by a flight of steps. The width of the street is, as of that on the north, 7.40 to 7.50 m., as is shown by the traces of the four massive travertine bases on which rested, probably, a monumental arch corresponding to that opposite.

Concerning the sewers of the period but little has been reported. It is clear, however, from the few data accessible that an extensive system existed. The large sewer seen and destroyed in 1878,³ the line of which was parallel to the front of the basilica of Maxentius, may well have been the main artery of the system belonging to this region, since many smaller sewers were found opening into it on the side towards the Palatine. This sewer, which was built of brick-faced concrete, was 2 m. high and 80 cm. wide, and its roof was in certain parts round and in others pointed.

The various parts of the new district were united into an architectural whole by the long lines of lofty arcades on either side of the Sacra Via and along the west side of the clivus Palatinus. In front of these arcades, which were separated from the street below by the broad sidewalk, or *crepido*, on either side of it, ran a line of three, or, towards the east, of two steps, above which a short flight of four steps led, between the piers, to the floor of the corridor behind, which lay from 2 to 2.80 m. higher than the Via below. These steps, the remains of two of which are shown in the accompanying illustration (Fig. 9), are of travertine and are, roughly, 30 cm. (a Roman foot) high and 45 cm. (a Roman foot and a half) wide. Owing to the general plan of the district, the length of the two greater arcades

¹ For these rooms, see Van Deman, *The Atrium Vestae*, pp. 28-32 and Plan C.

² For this street, see *op. cit.*, pl. IX, fig. 1.

³ *Not. Scav.* 1878, pp. 133, 163.

differed somewhat. That on the north which extended, at least in the original design, as is clear from the remains, from the street east of the basilica Aemilia to the top of the Sacra Via, was between 195 and 200 m. long. The arcade on the south, however, reaching from the area before the entrance to the precinct of Vesta to the clivus Palatinus, was but 186 m. (630 Roman feet) in length. The exact length of the arcade beside the clivus Palatinus is, at



FIGURE 9.—STEPS OF THE ARCADE ON THE SOUTH OF THE SACRA VIA.

present, unknown. The entire width of the arcades, exclusive of the steps along the front, was 11 m. (37 Roman feet) while the corridor inside measured but 6.40 m. (22 Roman feet). In general slope the arcades followed quite closely that of the Via below, though differing somewhat towards the west. Concerning the level of the lower part of that on the north, no data are obtainable, since no remains except of the concrete foundation walls are now traceable. Fifteen to sixteen metres east of the temple of Antoninus and Faustina, a small portion is still visible of an open gutter, or water channel, of travertine, the line of which crosses that of the concrete foundations, in which it is embedded. Its relation to the structures near is not clear. Almost 6 m. to the east of this gutter, the concrete walls rise

about a metre, above which the traces of the massive bases of two large piers are still visible, similar to those on either side of the cross streets further to the east referred to below. The level of the floor of the arcade, which rises normally 1.20 m. (4 Roman feet) above the concrete foundations, was about 17.10 to 17.20 m. above sea level, as shown by the remains just described. Beyond this point the level rose gradually to the west side of the via to the Carinae where, as shown by the remains, it was 19.40 to 19.50 m. (see PLATE IV, Section A-A). Four or five steps led down from the arcade to the via, which lay at this point somewhat more than 17.50 m. above sea level. On the opposite side of this via, where the remains of three piers on either side of the arcade are still preserved or are clearly traceable, the level rises abruptly, since the floor of the arcade, which was reached by a flight of at least seven or eight steps, lies at about 20.30 m. above sea level. Although no data are accessible concerning the exact level further to the east, owing to the erection of the basilica of Maxentius, the front wall of which rests directly upon the remains of that of the arcade (see PLATE III), it is probable that it did not differ essentially from that of the better-preserved arcade on the opposite side of the Sacra Via.

On the south side of the regia a short flight of steps led from the open space east of the Forum, the elevation of which differed little seemingly from that of the preceding period, to a small, irregularly-shaped area between the regia and the precinct of Vesta (see PLATE III), the level of which was about 15 m. above sea level. About 5 m. to the east of the doorway leading from this area to the court before the atrium Vestae, a flight of four steps led up to the western end of the arcade on the south, the floor of which lay at a level of from 15.80 to 15.90 m. From this point the arcade rose, with a gradient of about 5.50 cm. to a metre, for a little over 68 m. to the cross street connecting the Sacra Via and the Nova Via, where its elevation was 19.40 to 19.50 m. (see PLATE IV, section A-A). On the eastern side of this street, which, like the via to the Carinae opposite, lay much lower than the arcade to the east and west of it, the level rose by a flight of seven or eight steps to 20.20 to 20.30 m. Beyond this point the upper portion of the arcade, like the Via below, ascended much more rapidly, with a general slope of about 7.25 cm. to a metre, to the junction of the Sacra Via with the clivus Palatinus, where it reached a height of 28.30 to 28.40 m. For the level of the arcade on the west of the clivus Palatinus, no reliable data are at hand. It is probable, however,

that it differed little in its general slope from that of the *clivus* itself.

For the determination of the more important architectural features especially of the two greater arcades, the data, though not abundant, are decisive. These arcades consisted of a double row of massive piers, 33 in number on the south of the *Sacra Via* with possibly a somewhat larger number, originally, on the north, between which ran a covered walk, or passageway, for pedestrians. A little less than halfway to the top of the *Sacra Via*, the regular line of the arcades was broken by the cross streets on the north and south. While it is possible that the lines of the arcades were entirely interrupted at this point, it seems more probable, from the existing remains of the large travertine bases described below, that the streets were spanned by monumental arches. The distance between the centres of the piers, their axial unit, was 5.30 to 5.40 m. (18 Roman feet). The covered passageway, or ramp, between the rows of pillars, which was 6.40 m. wide, consisted of series of inclined planes interrupted at regular intervals of about 5.50 m. by a low step. The piers which formed these arcades consisted of double plinths, on which rested massive square pillars measuring 1.35 m. in width and 1.30 to 1.40 m. in thickness. The plinths, which rose 1.75 m. (6 Roman feet) above the concrete foundations, were composed of a central core of rough blocks of travertine, measuring often 1.80 to 2 m. in length and 75 cm. to a metre in width and thickness (see Fig. 10), with a revetment, probably of marble, though no remains have so far been identified. The lower part of the plinth measured normally about 1.80 to 1.85 m. (approximately 6 Roman feet) in width, 2.50 m. ($8\frac{1}{2}$ Roman feet) in thickness, and about 1 m. ($3\frac{1}{2}$ Roman feet) in height. The upper portion was but a trifle smaller, as is clear from the imprints in the concrete walls by which the piers were, later, partly enclosed (see Fig. 2), as well as from a few fragmentary remains. The plinths on both sides of the cross streets on the north and south of the *Sacra Via*,—on which rested probably, as suggested above, the monumental arches at the entrance to these streets,—as well as those at the upper end of the arcades are of double width, though their thickness remains the same. Though no remains have been left of the square pillars above these plinths, their form and dimensions have fortunately been preserved in the impressions on the concrete pillars built against them at a later period,¹ which will be discussed at another time. It is clear from

¹ For the impression in one of these walls, see Fig. 2, the wall above the base.

these indubitable concrete records that the pillars, which were seemingly of travertine, measured, as stated above, 1.35 m. ($4\frac{1}{2}$ Roman feet) both in width and thickness while, in plan, they resembled a Greek cross. The massive foundation walls of concrete on which the piers of the arcade rested are from 2.40 to 2.50 m. wide and rise from 1 to 2 m. above the remains of the preceding period, though at certain points, most notably near the junction of the clivus



FIGURE 10.—TRAVERTINE FOUNDATIONS SOUTH OF THE NOVA VIA.

Palatinus and the Nova Via they are sunk many metres below that level (see Fig. 6). The concrete of which these walls is made is that characteristic of the period of Nero.¹ The mortar is dark gray and very friable. The *caementa*, or aggregate, are very large and show an unusual quantity of travertine, a noticeable hall-mark of the work of the period in this section of the new city.

Though forming as a whole a single architectural group, the new district was divided, as has been said above, into two somewhat unequal parts by the line of the two cross streets on the north and south of the Sacra Via. The western half of the region, though

¹ For this concrete, see *A.J.A.* XVI, 1912, pp. 404 f.

conforming, in its main lines, to the new plan, retained much of its earlier character. The older monuments, owing to their religious nature, though incorporated in the general scheme and united to the newer structures towards the east by the lofty arcades just described, which formed a monumental façade in front of them, remained in great part unchanged in their level, orientation and general position.

Owing to the presence of the later buildings and the limited area of the modern excavations, but little is known of the buildings behind the arcade on the north side of the Sacra Via along this part of its course. Toward the east, however, the temple of the Penates, while much injured by the fire, as has been shown above, maintained its older position, though not seemingly restored until the following period. Along its east side, the remains of a line of shops are still visible beneath those of the later period, which from their orientation and type of construction may be assigned to this time.

The group of monuments on the south forming the religious centre of the earlier city met with varying fortunes at the hands of Fate and the imperial architects. The regia, which had escaped unscathed from the great fire, not only retained its original level and orientation but shows no signs of restoration at this period. The evidence concerning the temple of Vesta is less clear. While it is certain that it retained its original orientation, its level has not been determined. Apart from an unfaced concrete wall which surrounds the lower part of the earlier podium towards the north and west, no clear traces of any further restoration have been found. Unlike its more illustrious neighbor, the regia, however, the house of the Vestals was burned to the ground. It was, therefore, wholly rebuilt in conformity to the new plan, at a higher level and with the new orientation, as has been shown elsewhere.¹ The ramp on the west of the atrium was also restored, though it retained the older orientation. In connection with the new atrium, a line of rooms or shops was built along its north side in the rear of the arcade to which it was structurally united (see Fig. 2).² These rooms, which are eight or nine in number, including that which served as a *vestibulum* to the newly built atrium, are from 4.50 to 4.65 m. wide and about 4.40 m. long. The walls are 74 to 75 cm. ($2\frac{1}{2}$ Roman feet) thick, except that in the rear, which was 89 to 90 cm. (3 Roman

¹ *The Atrium Vestae*, pp. 15-20 and Plan A.

² Through a misinterpretation of the remains of the *crepido* belonging to the Sacra Via, a similar line of rooms was incorrectly assumed as existing on the opposite side of the arcade. See *The Atrium Vestae*, p. 16 and Plan A.

feet). The type of construction both of the body of the wall and of the brick facing is that characteristic of the period of Nero.¹

Between the cross street on the south of the Sacra Via and the atrium Vestae of this period, considerable traces still exist of a number of travertine bases similar to those which form so notable a feature of the upper portion of the region. The insufficient data afforded by the scattered remains render the exact nature of the structure to which they belonged somewhat uncertain. Since, however, the bases so far identified are in line with certain of those belonging to the great porticus to the east and the line of the more important walls of the later atrium Vestae coincides exactly with that of other pillars of the same building, it seems probable that this portion of the new district was occupied, as shown in the plan of the region (PLATE III), by a lesser porticus forming practically a part of that to the east.²

The eastern portion of the new quarter, with its more modest structures and its freedom from public monuments, offered a clear field for the restless activity of the building-mad emperor. Behind the magnificent arcades on either side of the new Sacra Via, this activity found expression in a spacious porticus, a type of structure which, though well known to the Romans through the great *Saepta* and the porticus *Vipsania*, was, according to an ancient writer, an especial passion of Nero.³ By these great structures, the pillars of which rose, row above row, behind the lofty arcades on either side of the new Via, the whole region was transformed into a fit foreground for the "far-gleaming portals of the dwelling of the new divinity" above.

The extent of the porticus north of the Sacra Via has not as yet been determined, owing to the incomplete data at present accessible concerning the excavations inside the basilica of Maxentius. That it differed little originally from that of the basilica is very probable, however, since the walls of the later building on the north, if not on the east, may well, like those on the south, have rested on the earlier foundations (see PLATE III). This is made more probable by the remains of a narrow street which have been found along the back of the basilica. Towards the west the porticus extended to the via to the *Carinae*, while the line of rooms on the west side of that via point to its possible continuation further to the west. In level

¹ For the construction of the period of Nero, see *A.J.A.* XVI, 1912, pp. 404-406.

² In the earlier discussion (*The Atrium Vestae*, pp. 17f), this portion of the district was incorrectly held to belong to the Atrium.

³ Suetonius, *Nero*, 16, 31.

it followed closely that of the arcade in front, as can be seen from the remains now visible under the western part of the basilica. The porticus, so far as at present known, consists of four rows of square pillars sixteen in number except in the north row, which has but fifteen. The distance between the pillars is in general from 4.40 to 4.50 m., though the actual space is somewhat less between the row

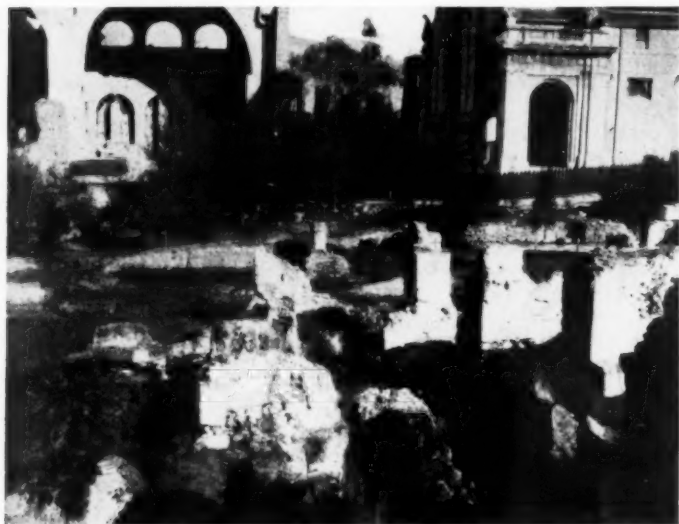


FIGURE 11.—REMAINS OF THE SOUTH PORTICUS.

towards the south and the arcade in front, owing to the greater size of the piers belonging to the latter.

The porticus on the south, the remains of which are fortunately more numerous, as can be seen in the accompanying illustration from a photograph taken after the excavations of 1914 (Fig. 11), extended on the north from the arcade adjoining the Sacra Via to the terrace wall supporting the Nova Via on the south. On the east and west it was bounded by the clivus Palatinus, and the via opposite that leading to the Carinae, or to the atrium Vestae, if the smaller porticus on the west of that via be included. The level of the porticus, while following the general slope of the arcade in front of it, rose towards the east by a series of level areas, or artificial

platforms, the width of which is uncertain. Towards the south little if any difference in level occurs. The plan of the porticus, like that on the north, is simple, consisting of eight rows of eighteen pillars each forming an open hall, the façade of which is formed by the arcade in front. Along the south side of this hall it is probable that there was a narrow passageway or open street, since the bases of the piers of the last two rows are considerably larger than the rest. The distance between the rows of pillars,—except that towards the arcade, which is a trifle less,—as well as between the individual pillars is from 4.40 to 4.50 m. The pillars, or piers, of this porticus, as of that on the north, while not unlike those of the arcades, are less massive and of a simpler form. They consist of a plinth on top of which rested a simple square pillar. These plinths, the height of which was the same as of the plinths of the arcades, were, so far as can be at present determined, from 1.80 to 2 m. square and consist of a core of travertine blocks but a little less huge than those of the bases of the piers of the arcade, with a revetment, seemingly of travertine. The simple pillars which rose above these bases were 1.18 to 1.20 m. (4 Roman feet) square. The foundations on which the piers rested, several of which can be seen in the illustrations above, (see Figs. 5 and 11), are about 2 to 2.20 m. square. The concrete of which they are made is the same as that of the foundation walls of the arcades, which has been described above.¹

With the rise of the broad avenue, flanked by the long lines of lofty arcades and splendid halls on either side, the *Sacra Via* with its long memories of the past vanished, and the new district became but a part of the vast scheme of magnificent palaces and gardens, endless colonnades and courts with which Nero sought to satisfy his mad passion for building, after the great catastrophe of 64 A.D. The four years of riotous building, and no less riotous living, coupled in Roman phrase with that other ill-omened four years when the people saw, for the first time, their whole city "engirdled with the palaces of their rulers,"² came to an end. Nero passed, for the last time, from the marble-lined palace on the Palatine across the spacious vestibulum with its golden image towering high above the lordly avenue of the *Sacra Via* to the quieter gardens of the Esquiline. Within a few months, the thrifty Sabine passed up the great avenue as conqueror and avowed restorer of the stricken city. The great temples and other public monuments were rebuilt. New streets cut into pieces the unwieldly mass of the Golden House and the

¹ P. 418. See Fig. 11.

² Pliny, *N.H.* 36, 24.

homes of the populace sprang up amid the ruins throughout the whole city. As a part of the great policy of restitution to the people of their stolen rights and possessions, the district of the Sacra Via, as will be shown at a later time, was given back to the people in a new form, its old-time character as a region of barter and trade again restored and the magnificent arcades and halls transformed into the great warehouses for the people, the *horrea piperataria et Vespasiani*. *Sic transit gloria Mundi*.

ESTHER BOISE VAN DEMAN.

ROME, 1922.

HERACLES AND ACHELOUS ON A CYLIX IN BOSTON

In a previous article¹ I have endeavored to discuss the problem of Heracles and marine divinities on vase-paintings, and reached the conclusion that but one divinity, the Old Man of the Sea (*ἄλιος γέρων*), is all that needs to be considered, and that Nereus, Triton, and others, are merely later manifestations of him under different names. It is a natural transition, therefore, to follow this discussion of marine divinities, with the struggle of Heracles with the river-god Achelous. This is all the more natural because, in one vase-painting, an Attic red-figured stamnos in the British Museum, bearing the signature of Pamphaeus as maker ($\Phi\text{AN}\Phi$. . . $\text{E}\Gamma\text{OIEI}$),² only the horn, and the retrograde inscription $\text{A}+\text{E}\Lambda\text{OIO}$ distinguish the river-god from the "Triton" of so many Attic black-figured vases. To be able to bring together new material on this exploit of the hero is the purpose of this paper, and to publish for the first time what seems to be one of the very earliest representations of this myth now extant in Greek art.³ At the same time I am fulfilling a promise made in 1913,⁴ to publish a black-figured cylix now in Boston, with a representation of the story of Circe and Odysseus depicted on one side of its exterior.

I shall not keep my promise, however, as far as the discussion of the scene from the Odyssey is concerned. This has been done, and the vase published, far better than I could do it, by Franz Mueller,⁵ who has also given a complete list of ancient works of art, particularly vases, that show this subject,⁶ far more complete than those which preceded it.⁷ I shall content myself, therefore, with referring to

¹ *A.J.A.* XXVI, 1922, pp. 174-192.

² British Museum E 437. Gerhard, *A.V.* 115. For bibliography, see Hoppin, *Handbook of Attic Red-Figured Vases*, II, pp. 292-3, No. 10*.

³ I am greatly indebted to the kindness of Dr. Lacey D. Caskey, of the Museum of Fine Arts in Boston, for permission to publish this vase, which first was called to my attention in 1912, when I was studying vases under Professor George H. Chase of Harvard University. I must also acknowledge my indebtedness to Professor David M. Robinson, for certain references that would otherwise have escaped me.

⁴ *A.J.A.* XVII, 1913, p. 3, note 1.

⁵ *Die Antiken Odyssee-Illustrationen*, Berlin, 1913, p. 55, fig. 5.

⁶ *Ibid.* pp. 47-79. See also his dissertation, *De Monumentis ad Odysseam Pertinentibus*, Halle, 1908, pp. 31-45.

⁷ Such as Bolte, *De Monumentis ad Odysseam Pertinentibus*, Berlin dissertation, 1882, and Walters, *J.H.S.* XIII, 1892-3, p. 82. See also Walters, *History of Ancient Pottery*, II, p. 136.

Mueller's work, and shall devote my time rather to the opposite side of the vase, that shows the struggle of Heracles and Achelous.

This vase is of a technique unquestionably Attic, and early in the black-figured period. It is a cylix, 18.2 centimetres high as restored, and 26.7 centimetres in diameter, and was acquired by the Museum in 1899.¹ It has been much mended, the handles are missing, and the foot is modern.² In shape it is of the type of the so-called



FIGURE 1.—CIRCE AND THE COMPANIONS OF ODYSSEUS: CYLIX IN BOSTON.

"Kleinmeister" cylices, but rather larger than the average specimen of this type. The decorations are in a central continuous frieze of the color of the clay, the upper and lower parts of the exterior being covered with the black glaze.

Taking up the designs in detail, I shall follow, and largely quote from, the description given in the Museum report, for the year of its acquisition.

A. Circe and the Companions of Odysseus (Fig. 1). Circe stands

¹ Acquisition No. 99.519. *Annual Report*, Museum of Fine Arts, 1899, p. 61, No. 17.

² Mr. Caskey informs me that the fragmentary state of this vase is such as to preclude the possibility of measuring it in terms of Dynamic Symmetry.

in the middle, profile to right, offering the cup to one of the companions. She is nude, with her flesh painted in white overcolor on the black glaze. Her head, as well as that of the man who takes the cup, is missing. Between the two sits a dog, looking up at the man. From the right, three companions walk towards Circe, expostulating violently. All are nude; the first has the head of a dog, the second, that of a panther, turned full face, the third, that of a goat. All have human hands. Behind Circe stand three more, with the heads of a horse, a cock, and a lion, respectively. These are also nude.



FIGURE 2.—CIRCE AND THE COMPANIONS OF ODYSSEUS: KYLIX IN BOSTON.

Following them comes Odysseus himself, rapidly advancing towards Circe, with drawn sword, his chlamys hung over his left arm. Behind him, and under the missing handle, stands a man, closely draped in a mantle, profile to right, perhaps to be thought of as Eurylochus.

Those who are familiar with the representations of this subject on vase-paintings, will be struck at once by the similarity in treatment shown between this vase and the other Circe kylix in Boston, so often described and published (Fig. 2).¹ Our vase shows considerably more freedom of drawing than the other, but the arrangement of figures is essentially the same, and even the dog in the centre is reproduced in both vases. Furthermore, they are the only two vases extant today showing this subject that treat it in this way. This, it would seem,

¹ *Museum Report*, 1899, p. 59. Walters, *op. cit.* II, p. 136. Mueller, *De Mon. ad Odysseam Pertinent.*, pp. 10-11, 34-5. *Handbook to Museum of Fine Arts*, 1911 ed., p. 72 (first published). Mueller, *Antiken Odyssee-Illustrationen*, pp. 14, fig. 1, and 52, fig. 4. Luce, *A.J.A.* XVII, 1913, pp. 1-13. Buschor, *Griech. Vasenm.*, 1913 ed., p. 133, fig. 87, and English translation, fig. 92, pl. L.

might show that the two cylices are not far apart chronologically, or else that they are copies of a common original painting. In my opinion, it rather indicates their being from the same atelier, though distinctly not by the same hand. This point is important in a theory that I wish to prove, if I can, later on.

The reverse side (Fig. 3) shows the combat of Heracles and Achelous. In the centre, Heracles advances rapidly to the right,



FIGURE 3.—HERACLES AND ACHELOUS: CYLIX IN BOSTON.

seizing the river-god, who is represented as a bull with a human face. He grasps him by the horn with his left hand, and thrusts at him with the sword in his right. The hero wears the lion's skin over a short, tight-fitting chiton, with short sleeves, decorated with white spots. Around his waist seems to be a belt, to which is hung his scabbard, which appears in the background. Achelous has been forced to his front knees, and the hero is still pressing him down. Behind Heracles are four spectators, closely draped in himatia. All are bearded, and one of them is under the missing handle. Behind Achelous, stand two more, one of whom has no beard.

The myth of Heracles and Achelous is well known, cited by many authors, the most familiar place being the opening lines of the

Trachiniae of Sophocles,¹ where Deianira tells in moving terms her wooing by the god, her repugnance to his suit, and her deliverance from his attentions by Heracles: and Ovid,² where Achelous tells the tale himself; but the shortest account, and the most complete, though with very little literary value as compared to the other two, is that of Apollodorus.³

The works of art showing Heracles and Achelous are few in number. Only in two places does Pausanias record seeing representations of this myth; at the throne of Apollo at Amyclae⁴ and a wooden group by the Spartan artist Dontas⁵ at the Treasury of the Megarians at Olympia. It is curious that, although the scene of the story is laid in Aetolia, both of these works of art, the only major ones of which we have record, should be connected with Sparta. It is needless to say that neither of these monuments is extant.

Of the extant objects I shall confine myself to vases. Other representations exist, especially on gems, and there is a small bronze group of the combat on an Etruscan tripod in Pétrograd;⁶ and Achelous alone is often found on coins; but I shall not touch these works of art here, except merely to say that, with the exception of some of the gems and coins, which need not concern us in this investigation, they seem to be distinctly later than the vase here published.⁷ But I do wish, in passing, to comment on an alleged representation of Achelous on Etruscan antefixes of the fifth century B.C., from Veii (Fig. 4), now in the Museo di Villa Giulia in Rome.⁸ In my opinion, it is unlikely that these really are intended for

¹ Vv. 9 ff.

² *Met.* IX, 1 ff.

³ *Bibl.* II, 7, 5. Ed. Wagner, II, 148.

⁴ Paus. III, 18, 6. For a recent discussion of this monument see Klein, *Arch. Anz.* 1922, pp. 6-13.

⁵ Paus. VI, 19, 12. Some scholars, notably the late Carl Robert, try to identify this artist with Medon, without, as it seems to me, sufficient authority.

⁶ Roulez, *Annali dell' Inst.* XXXIV, 1862, p. 197 ff.; *Mon. dell' Inst.* VI-VII, pl. LXIX.

⁷ For those interested in bibliography, I give the following references:

Millingen, *Transactions of Royal Society of Literature*, II, 1, 1832, p. 95 f.

Urlichs, *Annali dell' Inst.* XI, 1839, p. 265 ff.

Gerhard, *A.V. text*, II, p. 106 ff.

Roulez, *op. cit.*

Jahn, *Arch. Zeit.* 1862, pp. 314-27, 329-31.

Stephani, *Compte-rendu de l'Acad. de St. Pétersburg*, 1867, pp. 5, 19.

De Witte, *Gaz. Arch.* I, 1875, p. 84.

Lehnerdt, *Arch. Zeit.* 1885, pp. 105-20.

Von Duhn, *Röm. Mitt.* II, 1887, p. 258.

Furtwängler, *Samml. Somzée*, p. 76 f.

Articles 'Achelous' in Daremberg-Saglio, Pauly-Wissowa, and Roscher.

Article 'Herakles' in Roscher, by Furtwängler.

⁸ E. Douglas Van Buren, *Figurative Terra-Cotta Revetments in Etruria and Latium*, pp. 13-14, and pl. V; see also Giglioli, *Not. Scav.* 1922, pp. 206-215, and pl. I.

Achelous; they should be regarded rather as portraits of the horned Dionysus, or "Stierdionysos," which is not uncommon.¹ My reason for this is founded on the Bacchic character of the Etruscan antefixes of this period, which are, when the central figures are masculine, usually heads of satyrs.²

Of the vases, there is but one that can possibly antedate our specimen. This is a Corinthian cylix, formerly in the Somzée collection,³ and now in the Musée de Cinquantenaire at Brussels (Fig. 5), which would appear to be almost, if not absolutely, the earliest representation of this myth in Greek art, as it can be dated in



FIGURE 4.—ANTEFIXES FROM VEII.

the early sixth century B.C. Here we find Heracles wrestling with Achelous in much the same manner as he is found on vases showing the contest with the Nemean Lion, where the standing motive is employed.⁴ Achelous is represented, on the analogy of the Centaurs, with the upper torso and arms of a man. Although Heracles has hold of the river-god by the horn, the whole scene reminds us far more of a Nemean Lion vase than of any of the other Achelous vases which are extant. And, indeed, we might say of nearly all the Achelous vases that they appear

¹ Gerhard, *A.V.* II, p. 108, note 92, gives the ancient literary references for this form of Dionysus.

² See *A.J.A.* XXIV, 1920, pp. 352-69, and XXV, 1921, pp. 266-78.

³ Published by Furtwängler, *Samml. Somzée*, pp. 76 f., fig., and pls. XLII, XLIII. It is also described in the Somzée Sale Catalogue, 1901, No. 11. I saw this vase in Brussels in the summer of 1923. The condition of the design is not nearly as good as the plates referred to in the note would indicate.

⁴ For a discussion and list of vases, of this manner of wrestling the Nemean Lion, see Luce, *A.J.A.* XX, 1916, pp. 440-2, and 460-7 (460-4 for the standing method).

to be derived, as far as their composition goes, from the representations of other exploits of the hero, certainly where the wrestling scheme is employed. In listing the Achelous vases, I shall try to hint in each case what other deed of the hero influenced the vase-painter in the representation of this subject. Thus we find that there is no standard way of showing Heracles and Achelous, as there is in the more common exploits, like the Nemean Lion, Cretan Bull, or Erymanthian Boar, to take three of the best known ones.

Returning to our Somzée cylix, we find the struggle with Achelous, and the contest of Theseus with the Minotaur both on the same side



FIGURE 5.—HERACLES AND ACHELOUS: CORINTHIAN CYLIX: BRUSSELS.

of the vase. Separating these two groups, stands a man, richly dressed in a long chiton and himation, and carrying a staff in his right hand. He is facing the group of Heracles and Achelous, and is to be regarded as Oeneus. At the right of the group, and also facing it, stands a woman, who is obviously Deianira. Behind her, a biga, or two-horse chariot, empty, stands facing the right, while to the right, running away from the combat, is a nude man, with a spear in his right hand, probably to be thought of as Iolaus.

It is my belief that the cylix in Boston, while later than this Corinthian vase, is earlier than any of the other Attic vases showing the subject, and is, therefore, one of the very earliest representations of this exploit of Heracles in Greek art extant today.

In classifying the Achelous vases, the list, as previously known, and not including the Boston cylix, divided the black-figured examples into two categories, those in which Achelous has the head and foreparts of a man, and the body of a bull, on the analogy of the

Centaurs, as stated above, and those where he has only the head and arms of a man. Of the latter class, there were only two examples known, both in the Academy of Petrograd.¹ Furtwängler² puts the vases of the latter group as the latest. In all these vases, Heracles is actually wrestling in some way with the river-god. In the red-figured vases, Heracles usually attacks him with sword or bow, and Achelous has only the head of a man, the exceptions being in the case of the stamnos in the British Museum by Pamphacius, previously referred to,³ where Achelous has the "Triton," or more correctly, the Halios Geron, form, and Heracles is wrestling with him; and a cylix in the Louvre, No. G10, signed by Epilycus as painter (ΕΠΙΛΥΚΟ . . . RAΦΣΕ . KALΟΣ),⁴ very much restored, where the wrestling type seems to have been adhered to.

A list of Achelous vases will not be out of place here. This list is divided into groups, according to the number of subsidiary figures watching the combat. In each case the method of attack is given, and in the case of vases of the wrestling type, a comparison to some other wrestling exploit of Heracles is also given, wherever possible. A republication of all these vases, if space permitted, would show that, more than in almost any other of the Heracles myths, no two vases are alike, nor is any one method of portrayal found more than once, or at most twice. This is doubtless due to the relative rarity of the subject, compared with the Erymanthian Boar or the Nemean Lion, where the vases run into the hundreds, and one or more standard methods of showing the subject are developed. In this case, only fourteen vases are known to me to represent this combat, and I shall classify them as follows:—

A. NO ONLOOKERS

I. Black-figured.

1. Amphora, formerly in the Spinelli Collection at Acerra. Wrestling type, somewhat recalling the Nemean Lion.⁵
2. Amphora, in the collection of the Academy of Petrograd. Achelous has only the head and arms of a man. Very much on the analogy of those vases which depict Heracles and the Cretan Bull.⁶

¹ Stephani, *Compte-Rendu*, loc. cit. p. 18.

² In Roscher, *Lexikon*, s.v. 'Herakles', p. 2209.

³ See p. 425, note 2, of this article.

⁴ For bibliography, see Hoppin, *Handbook of Attic Red-Figured Vases*, I, pp. 342-3, No. 1* (photograph of interior only). The inscription in Hoppin does not quite correspond with the reading of the *Album des vases antiques du Louvre*.

⁵ Von Duhn, *Röm. Mitt.* II, 1887, p. 258, No. 1, fig. 23, pls. XI-XII, 2, 3.

⁶ Illustrated by Stephani, *op. cit.* p. 5; Reinach, *Répertoire des vases peints*, I, p. 55, No. 7.

II. Red-figured.

3. Cylix, Louvre G10, signed by Epilycus as painter. Apparently wrestling type.¹
4. Stamnus, British Museum E437, signed by Pamphaeus as maker. Wrestling type. Achelous is confused by the painter with Halios Geron.²
5. Nolan Amphora, Munich Jahn 251, new number 2327. Heracles attacks the river-god with bow and club.³

B. IN PRESENCE OF HERMES

III. Black-figured.

6. Amphora, British Museum B228.⁴ Wrestling type. Does not recall any of the other labors of the hero.
7. Amphora, Berlin 1851.⁵ Wrestling type, in the manner of some of the vase-paintings showing Heracles with the Cretan Bull.

C. IN PRESENCE OF DEIANIRA

IV. Red-figured.

8. Celebe, Louvre G365.⁶ Heracles attacks Achelous with his club.

D. TWO ONLOOKERS

V. Black-figured.

9. Amphora, Berlin 1852 (Athena and Oeneus).⁷ Wrestling type, somewhat recalling the Nemean Lion vases, of the standing type.
10. Amphora, Louvre F211 (Athena and Hermes).⁸ Wrestling type, somewhat recalling the Nemean Lion vases, of the standing type.

E. MORE THAN TWO ONLOOKERS

VI. Corinthian.

11. Cylix, formerly in the Somzée Collection and now in Brussels (Oeneus, Deianira, and Iolaus).⁹
Wrestling type, vividly recalling the Nemean Lion vases.

VII. Black-figured.

12. LeCYthus, Academy of Petrograd (?). Hermes, Athena, and Oeneus.¹⁰ Apparently wrestling type.
13. Hydria, British Museum B313.¹¹ Athena, Iolaus, Hermes, Deianira, and Oeneus. Wrestling type.
14. Cylix, Boston 99.519. Fig. 3 of this article. Six draped onlookers. Heracles attacks the river-god with his sword.

¹ See this article, p. 432, note 4.

² See this article, p. 425, note 2.

³ *Annali dell' Inst.* 1839, pl. Q; Reinach, *op. cit.* I, p. 259, Nos. 4 and 5.

⁴ *Arch. Zeit.* 1885, pl. VI; Reinach, *op. cit.* I, p. 458, No. 6.

⁵ Gerhard, *Etr. Kamp. Vasenb.* pls. XV-XVI, 1, 2.

⁶ *Arch. Zeit.* 1862, pl. 168; Reinach, *op. cit.* I, p. 393, No. 4; *Album des Vases Antiques du Louvre*, III, pp. 235-6, pl. 138.

⁷ Gerhard, *Etr. Kamp. Vasenb.* pls. XV-XVI, 3, 4.

⁸ *Arch. Zeit.* 1862, pl. 167; Reinach, *op. cit.* I, p. 393, No. 3.

⁹ See this article, p. 430, note 3.

¹⁰ Unpublished. See Stephani, *op. cit.* p. 19.

¹¹ *Gaz. Arch.* I, 1875, pls. 20, 21.

There are several other vases which, for what seem to me quite insufficient reasons, have been assigned to this subject. Chief among them is a red-figured cantharus in Boston, bearing the signature of Nicosthenes as maker.¹ In listing it, Dr. Hoppin tentatively suggests that one of the designs may be a representation of this myth: but, if it be an exploit of Heracles at all, it must be considered as the taming of the Cretan Bull, as the animal has none of the attributes of Achelous.

This is also true of a group of South Italian vases—all Apulian volute-handled craters—with scenes attributed to this subject by some scholars.² These vases show a hero, more akin to Heracles than to any other, wrestling with a bull, and, in my opinion, should again be thought of as representations of Heracles taming the Cretan Bull.

Another vase, quite erroneously assigned to this subject, is in the Jatta collection at Ruvo, and is unpublished.³ This is a rhyton, of the red-figured technique, in the form of a bull's head. On the rim, is a figure, seated on a rock, over which a lion's skin is draped. This figure is regarded by Jatta as a youthful Heracles, which is quite probable; but to stretch the conjunction of a picture of Heracles on a bull's head rhyton, into a representation of Heracles and Achelous is a glaring example of the length to which scholars of the middle of the last century were willing to go to attach a mythological interpretation to any and all vase-paintings!

The myth tells us that, in the course of the combat, Heracles tore off one of the horns of Achelous (in practically all the vases that I have listed, where the wrestling type is employed, Heracles is grasping him by a horn), after the latter had changed himself into a bull, and that Achelous gave to Heracles in exchange for it the horn of Amalthea.⁴ Some scholars believe, not without some justification, that a vase published by Tischbein⁵ shows Heracles with this horn, which, we are told, was an inexhaustible horn of plenty. If this be the case, the supplementary figures called by Reinach⁶ Zeus and Hebe, would be naturally Oeneus and Deianira. This vase was lost, and its very shape unknown, until 1917, when it turned up in the

¹ Accession number, 00.334; for bibliography, see Hoppin, *op. cit.* II, pp. 226-7, No. 3*.

² Notably Furtwängler, in Roscher's *Lexikon*, s.v. 'Herakles', p. 2231. These vases are Naples 3282 (*Arch. Zeit.* 1883, pl. 11; Reinach, *op. cit.* I, p. 449, No. 1), Ruvo, Jatta 1097 (*Bull. Nap.*, N. S., V, pl. XIII where this scene, however, is not published), and Ruvo, Caputi 377 (Jatta, *Cat. Collezione Caputi*, pl. VII).

³ Jatta Coll. 1121.

⁵ *Vases d'Hamilton*, IV, 25.

⁴ See Apollodorus, *loc. cit.*

⁶ *Op. cit.*, II, p. 327, No. 2.

Hope Collection Sale at Chrystie's,¹ but then having flashed, as it were, across the archaeological screen, it disappeared again, and I am unaware of its present location.

This, then, is a list of the vases which touch on the combat between Heracles and the river-god. Let us now take up what we can learn from the cylix in Boston.

First in order comes the date. I have indicated above the close resemblance between the side showing the adventure of Odysseus with Circe and that of the other cylix in Boston dealing with that story. The latter vase is admittedly very early in the black-figured technique, and shows Chalcidian and orientализing influence. Buschor considers it only a little later than the François vase, or almost contemporary,² and resembling vases from the atelier of Ergotimus, one of the signers of that vase. In technical skill, our artist of the Achelous cylix has not advanced far over this, although it is somewhat of an improvement over the other Circe cylix. But a careful comparison of our vase with the other Attic black-figured Achelous vases will certainly convince anyone who cares to make it, that the Boston cylix antedates them all, and that the writer of the *Annual Report* of the Museum of Fine Arts for the year of its acquisition³ has permitted himself a slip of the pen in describing this vase as in the middle of the black-figured period.

Granting, then, that this vase is one of the earliest extant to show this subject, what additional lessons can we learn from it? Certainly one very important one; to beware of glittering generalities. For two of the theses of previous writers are here weakened. It has been maintained, and, up to now, with every appearance of correctness, that the representation of Achelous on vases, with only the head of a man, was late, and confined only to late black-figured and to red-figured specimens; and that the earlier representations give him the foreparts of a man as well, on the analogy of the Centaurs; secondly, that in the earlier vases, Heracles invariably wrestles with Achelous, and is always unarmed; and does not begin to attack him with weapons until the red-figured period begins. Until this vase appeared these theories seemed absolutely sound. But it is impossible to regard this vase as a late example of the black-figured technique. It is undoubtedly early, only antedated by the Somzée cylix, and not very much by that vase even, and, therefore, acts as the gust of wind to upset the house of cards so carefully constructed by Leh-

¹ Sale Catalogue, No. 144, 2. It is a crater. See *A.J.A.* XXI, 1917, p. 414.

² *Griech. Vasenm.* 1913 ed., p. 134, and p. 133, fig. 87.

³ *Annual Report*, Museum of Fine Arts, 1899, p. 61, No. 17.

nerdt,¹ and especially by Furtwängler² that Heracles never uses weapons against the river-god on black-figured vases, and that the delineation of the god as a human-faced bull is late! For if this vase exists, doubtless there were plenty more in antiquity like it, that are now lost. Here on one of the earliest vases extant that shows the subject, we have Heracles attacking Achelous with his sword; and Achelous depicted as a bull with only the face of a man, both supposedly limited to the red-figured, or at best to the very late black-figured technique. This goes to show that it is impossible to lay down any hard and fast rule, attractive as such a proposition may seem, as to the method employed by an Attic vase-painter in portraying a given subject. Even in a myth so common as the combat of Heracles with the Nemean Lion, which I have used as an example of the standardization of the treatment of a myth, and where one of two methods of showing the subject is, as a rule, adhered to, variants exist³ which vindicate the originality of the vase-painters as a class of artists.

Another thing that this vase shows very well is the influence of Ionia on the early Attic black-figured technique. It is probable that the earliest vase-painters and makers, such as those who put their names with such justifiable pride on the François vase, were either Ionians, or drew their inspiration from Ionian sources. We have seen that the knob-handled cylix, which deals with the stories of Polyphemos and Circe shows oriental influence, and that this to a very large extent is reflected on the side of our vase that deals with the latter of these stories. This oriental influence doubtless came through Ionia.

The proof, however, of the influence of Ionian models on the painter of our vase is afforded by the example of the gems. The combat of Heracles and Achelous is shown on two archaic gems of the sixth century B.C. one of which is now in the British Museum, and the other in Berlin.⁴ Furtwängler considers these two gems to be the work of the same hand, and calls them of Ionic workmanship. These gems are either contemporaneous with, or somewhat earlier than, our vase, the probability being that they antedate it by a short

¹ *Arch. Zeit.* 1885, pp. 105-20.

² Roscher, *Lexikon*, s.v. 'Herakles,' p. 2209, and also *Samml. Sonzée*, p. 78.

³ For a list of the more radical variants, see *A.J.A.* XX, 1916, p. 470. Especially important are the vases published by Gerhard, *A.V.* 94 (lost), and Walters, *Hist. Ancient Pottery*, I, pls. 31,32 (in the British Museum). The vase published in *A.J.A.* XX, 1916, p. 441, fig. 5, is also a variant.

⁴ Furtwängler, *Antike Gemmen*, pl. VI, 39, and pl. VIII, 3, respectively. The latter, in Berlin, was found in the necropolis of Falerii.

period: and in each case Heracles is not wrestling with the river-god, but advances upon him to attack. In the case of the gem in the British Museum, he is about to deal him a blow with his club; in the Berlin gem, he has just taken hold of the horn of Achelous with his right hand, and the tail with his left. In both cases Achelous is a human-headed bull, and is not given the body of a man, as in the Somzée cylix, and the bulk of the black-figured vases. In fact, the resemblance between the Achelous of these gems and that of our vase is very close indeed, and in other respects also the parallelism is very close. I know of no case on a gem where Achelous is represented as on the bulk of the black-figured vases, with a body on the analogy of the Centaurs. Nor does the wrestling type appear on gems until the end of the sixth or beginning of the fifth century, when it is found on an Etruscan scarab;¹ but even there Achelous is portrayed as in our vase. All of this shows that the vase in Boston is influenced by Ionia more than any of the others down to the end of the black-figured period.

I have endeavored in this paper to show the importance of this cylix in Boston as one of the earliest examples of the combat of Heracles and Achelous extant today, and as an upsetter of "rules" laid down with much care by various scholars. It also points once more, if it were in the least necessary to do so, to the great importance of the collection of vases of the Museum of Fine Arts in Boston, which will rank always as one of the very great collections in the world.

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¹ Furtwängler, *ibid.* pl. XVII, 58, and description of plates, p. 85, where a bibliography is given. The present location of this gem is apparently unknown, as it is not mentioned in the text.

EXCAVATIONS AT PHLIUS IN 1892

IN March, 1892, my brother Charles M. Washington and I undertook some preliminary excavations at the site of Phlius, south of Sicyon. The work was confined almost entirely to the acropolis and lasted for only one week; the intended further excavation was never carried out, nor was any report made to the American School at Athens, at which we were students. My notebook has recently come to light and, as no other digging seems to have been done on the site, it may be of interest to put on record the results of our modest excavations.

The site of Phlius has been visited and described by many travelers,¹ so that only a brief description is needed here. The acropolis

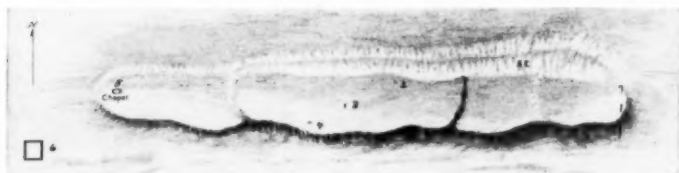


FIGURE 1.—ACROPOLIS OF PHLIUS.

occupied the lower end of a spur that runs west from Mt. Tricernum, on the east bank of the Asopus. A deep notch isolates the acropolis from the rest of the ridge. The acropolis is about 700 metres long, 70 to 80 metres across at its widest part, and its highest (eastern) point is about 85 metres above the surrounding plain, where lay, mostly to the south, the ancient city of Phlius. From its highest (east) end the ridge descends gently toward the west, being broken into two steps, of which the central one is the larger. A narrow terrace runs along the northern slope. The south slope is steep, and a curved embayment in this toward the western end is probably the site of the theatre. I am indebted to Mr. W. J. Lloyd, of the Topographic Branch of the U. S. Geological Survey, for having had made for me the sketch (Fig. 1) based on a rough sketch map

¹ See J. G. Frazer, *Pausanias's Description of Greece*, Vol. III, 1898, pp. 77-81. American Journal of Archaeology, Second Series. Journal of the Archaeological Institute of America, Vol. XXVII (1923) No. 4.

in my note book. A plane-table map of the ridge and vicinity is lost.

Remains of the polygonal city wall are present at the east end, where there is a tower, whence they run down hill to the south. Apart from this, there were few ancient remains visible on the acropolis. The most important are: an angle of the building on the north terrace (1, Fig. 1); a threshold (3), 2.70 m. long and 0.88 m. wide, on the central plateau; an upright part of a Doric column northeast of this (2); and a few Doric capitals and drums near the chapel of Panagia Rachiotissa (Virgin of the Rocks) (5), which stands on a lower step forming the west end of the ridge. Southwest of this chapel, in the plain below, is a rectangular area, about 25 m. square, outlined by remains of walls and with column drums projecting at regular intervals within; this is known as τὸ Παλάτι, the Palace (6). Over the site of the city proper, to the south, are many walls, cut blocks, and some column drums; but the study of this portion was postponed.

Trenches sunk in the highest, easternmost part of the ridge struck bedrock at a depth of about one metre, without revealing any walls. The only find here was the upper part of a small standing terra-cotta figurine, which is of the Tirynthian Argive type, and which closely resembles many of the figurines found at the Argive Heraeum.¹ The body is flat, with the breasts slightly indicated, and the arms are represented by long knobs which curve inward. The nose is pinched out, the eyes are represented by small disks, the hair is arranged in narrow flat plaits, one falling in front of each shoulder and four down the back. There are flat circular earrings, and a single, simple necklace, which bears an ornament on the breast. On the head is a plain cylindrical *stephane*. This object is, I think, now in the Metropolitan Museum of Art, New York City.

Near the southwestern corner of the main, central plateau there was uncovered, at a depth of 40 cm., a rectangular base (4, Fig. 1) built of roughly squared "poros" blocks; this base is 4.50 m. long (east-west), 1.90 m. wide, and 0.30 m. high. Only the north and east sides are smoothly finished, so that it is to be supposed that the base, and hence the monument upon it, faced toward the north. Nothing was found in the trenches which were sunk to bedrock around this base, except an unfluted column drum of limestone, 1.17 m. long and 0.88 m. in diameter. Trenches dug around the thresh-

¹ C. Waldstein, et al., *The Argive Heraeum*, II, 1905, pp. 19-22, pl. XLII, Nos. 5, 10, 12.

old near the centre of this plateau revealed no connection with any building, and the same result followed from digging around the fragment of a Doric column, 1.12 m. long and 0.44 m. in diameter, which projected from the ground to the northeast of the threshold (2). Other trenches sunk over this central part of the ridge also yielded nothing, and bedrock was met with at depths of from less



FIGURE 2.—TERRA-COTTA GARGOYLE FROM TEMPLE OF
AESCLAPIUS (?): PHLIUS.

than 1 to nearly 2 metres, while bare rock projects above ground at several points.

Some trenches were dug on the lowest step of the ridge at the west end, where stands the chapel of Panagia Rachiotissa, in the walls of which are several Doric capitals and drums and a triglyph, while some Doric drums and capitals lay on the ground near by. The digging here was brief because the priests objected to our working in the sacred precinct. Solid rock was met with at depths of about 40 cm., the soil being very thin. The only object found was the right half of a terra-cotta lion's head gargoyle or water spout, which had been split medially (Fig. 2).¹ The piece is 17 cm. long and 14 cm. in its greatest width. Its style is more realistic and the head evidently belongs to a later period than the lion's head water-spouts

¹ The object is now in the Boston Museum of Fine Arts (No. 98.162), and I am much indebted to Dr. C. H. Hawes for a photograph of it.

of the Argive Heraeum. While the decision as to its date must be left to archaeologists, I would hazard the suggestion that it belongs to the first half of the fourth century B.C.

The walls on the north terrace proved to belong to a small building, the remains of which were fully uncovered. (1, Fig. 1). A plan and section of this are given in Figures 3 and 4. The building faces east, but I have no record of its exact orientation. The north wall is 6.30 m. long (exterior), the west wall 7.45 m., while the south wall is only 5.72 m., about half a metre of its east end having been apparently destroyed.

The construction is well seen in the west wall, which is the best preserved. At the bottom, 1.70 m. below the present surface, begins

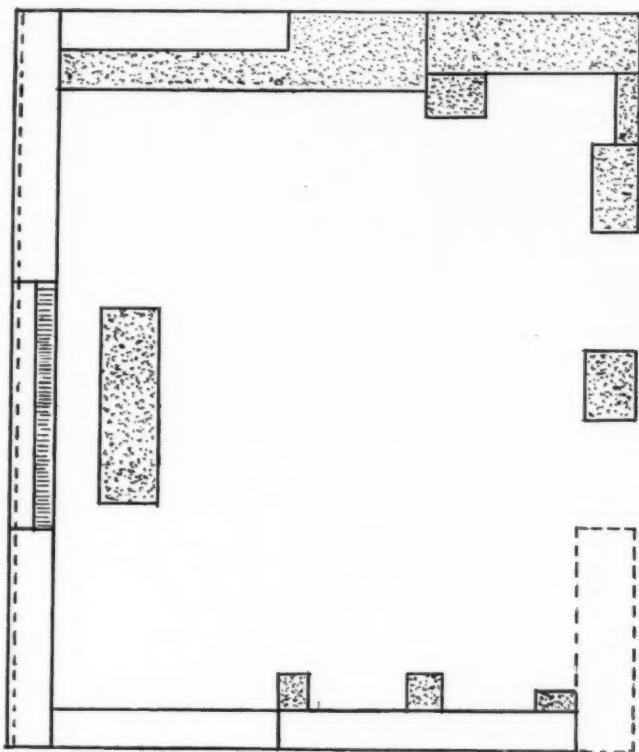


FIGURE 3.—NORTH BUILDING. White=limestone; dotted="poros."

the foundation wall, which consists of three courses of rather roughly cut blocks of "poros" stone.¹ The upper course is the best finished and is 31 cm. high; the second is somewhat rougher, but smoothed on the outer face, and is 40 cm. high; while the blocks of the lowest course are very roughly worked and are 50 cm. high. The width of the north foundation wall is 80 cm. over most of its length; that of the west wall is 60 cm., and that of the south wall is about 40 cm.

The cella wall proper, which rests on this foundation, consists of slabs of white limestone, cut smooth on the exterior, and carrying a fillet, 9 cm. wide, along the upper outer edge. These slabs are 74 cm. high and 37 cm. thick at the base; their length is somewhat variable, but is generally about 2.50 m. Three of these slabs extend



FIGURE 4.—NORTH BUILDING: SECTION EAST-WEST.

along the entire length of the west wall, two along the south wall, while only one is left at the west end of the north wall.

The central slab of the west wall presents a peculiar feature. Its inner (east) face is cut down obliquely and evenly from a distance of 25 cm. from the outer edge, the sloping plane surface extending to the inner lower edge, as shown in the section, Figure 4. I have been unable to conjecture the purpose of this very peculiar cutting, for which I can recall no parallel in the ancient Greek buildings that I have seen.

The north foundation wall is continued around the east side for a distance of 2.20 m., and at this corner is a recess formed by projecting blocks, as shown in Figure 3. At the centre of the east side is a square base of "poros" stone, the top of which is on a level with that of the foundation walls. The south wall, which is only one-half as wide as the north wall, shows on the inside three small projecting blocks of "poros." My notes leave me in doubt as to its eastern termination, but I have restored it conjecturally as continuing

¹ See Appendix 1 for a description of "poros" stone.

around the corner, like the north wall. If this be the correct restoration the building would appear to have had a double entrance or, at least, one broad entrance divided by a column.

In front of the sloping surface in the central block of the west wall, and at a distance of 45 cm., is a base of "poros" blocks, about 2 m. long and 0.60 m. wide. Its upper surface is 50 cm. lower than the top of the limestone slabs, so that it rises 25 cm. above the level of the top of the poros foundation walls. This is, presumably, the base of an altar or of the cult statue. The only objects found in the building were a few terra-cotta cones, such as were used for weaving. After having cleaned out the building and laid bare the walls, inside and out, we refilled the excavation at the request of the owner of the land.

Trenches sunk in different directions from the building showed nothing, except to the south. Here were found four Doric column drums, about 45 cm. in diameter, laid side by side, with blocks of stone between them. At the south end of this row of drums there was uncovered a roughly built arch, of very late (possibly Byzantine) period, 1.10 m. wide, which would appear to have supported a flight of steps to the central plateau above.

The building described above presents, as has been said, some notable peculiarities. It is wider than it is long; the walls are of different thicknesses; it appears to have a double entrance or one divided by a single column; while the entrance is centrally placed, the altar (?) seems to be a little off centre; the purpose of the sloping cut inner surface of the central slab of the west wall is enigmatical; the fillet at the top of the first course of the cella wall is unusual. The fact that no columns were found (except those to the south which are too wide for the walls) and that the walls (except that on the north) are too narrow for columns indicate that it was a simple cella with a single column *in antis*, like some of the treasuries at Delphi.

A little digging was also done at the spot called τὸ Παλάτι (the Palace) in the plain southwest of the chapel of Panagia Rachiotissa. Here a rectangular space, about 25.50 m. east and west by about the same north and south, is inclosed by walls which projected above the soil. The area was planted in grain at the time, but lower drums of columns, regularly spaced, were to be seen within the inclosure. Permission could not be obtained to dig within this area, but several walls of various ages were uncovered immediately to the west of it, when the work was brought to a close.

INTERPRETATION

Pausanias¹ mentions four sacred buildings on the acropolis; a grove and sanctuary dedicated to Ganymeda or Hebe "of awful and immemorial sanctity," a temple of Hera "on the left as we quit the sanctuary" (of Ganymeda); a temple of Demeter and Kore; and finally, "going down from the acropolis we pass on the right a temple of Aesculapius." He also says: "Below this temple is a theatre, and not far from it is a sanctuary of Demeter with ancient stone images."

I would suggest that the North Building (Fig. 3, 1) is the "sanctuary" of Ganymeda or Hebe. This would be the first temple met with by Pausanias, who was coming southward from Sicyon. The temple of Hera probably lay in the upper, extreme eastern point of the acropolis. This position harmonizes with its lying on the left as we leave the sanctuary of Ganymeda, and the terra-cotta figurine, with its *stephane*, closely similar to those of the Argive Heraeum, leads one to think that a temple of Hera was situated near by. The temple of Demeter and Kore probably lay in the central part of the ridge, and the threshold found here may have belonged to this building. The temple of Aesculapius we may safely consider, with Frazer, to have occupied the spot on the western end of the ridge where the chapel of Panagia Rachiotissa now stands. The rather numerous architectural fragments found here point clearly to the existence of a Doric temple near by, and this position agrees well with the statement of Pausanias that this was the last temple he passed on going down from the acropolis. The large rectangular walled inclosure, with regularly spaced columns over the interior, τὸ Παλάτι, near and below the chapel, I would identify with the "sanctuary of Demeter with ancient seated images." Its location fits in with what Pausanias says of it, and the general resemblance of its plan to that of the sacred inclosure at Eleusis makes a connection with the worship of Demeter very plausible. This is rendered the more probable by the later statement of Pausanias (II, 14, 1) that "the Phliansians themselves admit that they imitate the rites of Eleusis."

In conclusion, it may be said that, for a minor site, further excavations at Phlius would probably reveal some results of interest. There appears to be little left of ancient buildings over much of the acropolis and, as we learn from Pausanias and Xenophon that there were considerable areas of groves and corn land, it is probable that few buildings existed there. The depth of soil is also not great.

¹ Pausanias, II, 13, 3 ff. I follow the translation of Frazer.

However, the neighborhood of the North Building and the area around the chapel would probably repay digging, and the large inclosure of τὸ Παλάτι should also be excavated.

APPENDIX: "POROS" STONE

A few words may be said regarding what is, or should be, meant by the term "poros" stone and the differences between it and "limestone." "Poros" (πορὸς in modern Greek) is a somewhat indefinite term for a rock that is much used in Greece for a common building stone, the use of which goes back to a high antiquity. It is a variety of limestone, but differs from ordinary limestone in the following characters. It is very finely arenaceous or marly; most often of a pale cream color, also light yellow or light gray; somewhat granular but rather soft and friable and easily cut with a knife, especially when first exposed in the quarry. In this last quality (but not in origin) it resembles the various volcanic tuffs of the Roman Campagna, and to this ease in working it owes its extensive use as a building stone, especially for foundations and other architectonic parts that are not exposed to view. Even when hardened by exposure it is much more readily cut with a knife than is an ordinary limestone, and the non-petrographic archaeologist will not go far astray if he calls by the name of "poros" any such easily cut, finely granular, yellow, light cream or gray, dull-lustered and somewhat rough building stone, which effervesces with dilute hydrochloric acid or with acetic acid (strong vinegar) and usually leaves a fine muddy residue.

I have unfortunately no specimens of "poros" at hand, but some thin sections of specimens of "poros" collected by me at several localities and excavations in Greece show that the rock is microscopically of an extremely fine-grained texture, composed of very minute uniformly sized anhedral grains of calcite, with here and there some larger ones of quartz, and considerable clayey matter. The specimens examined by me show no evidence of stratification or remains of fossils. I have never specially studied the origin of "poros" but such observations as I made, both of the natural occurrence and of the petrographic characters, have led me to think that much "poros" resembles the Roman travertine in being a calcareous tufa (not a volcanic tuff), produced by the chemical precipitation of calcium carbonate, and not derived, as are the ordinary limestones, from more or less worked over organic remains.

Ordinary limestone is usually much more compact than "poros," decidedly harder, and with a smoother fracture; it is easily scratched but cannot usually be cut with a knife. The grain of limestone is apt to be somewhat coarser than that of "poros," it frequently shows signs of stratification, and often contains fossil remains, either visible to the naked eye or discoverable by the microscope. Much limestone again is more or less crystalline, showing small glistening surfaces here and there. This crystalline, or rather sub-crystalline, texture is evidence of the effect of metamorphism, through which limestone may be changed eventually to a wholly crystalline marble, of either fine- or coarse-grained texture.

The "poros" stone is one of the chief formations of the later Tertiary (Miocene or Pliocene) in Greece and it occurs at many places in the Peloponessus;¹ whereas limestone proper in Greece is much older, being almost wholly either early Tertiary

¹ Alfred Philippson, *Der Peloponnes*, Berlin, 1892, pp. 408, 416.

(Eocene) or Cretaceous.¹ The "poros" which was used at Phlius probably came from the immediate neighborhood, as the surrounding region is mostly later Tertiary, while the limestone blocks probably came from some quarry to the west or southwest, where there are Eocene and Cretaceous limestone beds.

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¹ Philippson, *op. cit.* pp. 390 ff.; R. Lepsius, *Geologie von Attika*, Berlin, 1893, pp. 23 ff.

SCIONE, MENDE, AND TORONE

AFTER the revolt of Scione and Mende from the Athenians in the year 423 B.C., during a period of truce between the Athenians and the Lacedaemonians, Brasidas was compelled by his alliance with Perdiccas to make an expedition to the north against Arrhabaeus and so was unable to be present in person to defend his new allies from the attempts at reconquest by the Athenians.¹ The Athenians,



FIGURE 1.—VIEW OF BARBER FROM THE ACROPOLIS OF MENDE.

on the other hand, lost no time in marching against the rebel cities. With Potidaea as their base they set out with fifty ships and about three thousand men, landing first at the Posidonium and proceeding thence against the Mendaeans.²

Although the scanty remains of the cities themselves consist only of a few traces of fortification wall and fragments of pottery, the contour of the land makes it possible, with the help of Thucydides, to determine the position and approximate extent of the habitation.

Near the modern town of Calandra, about a mile to the southeast,

¹ Thuc. IV, 124, 1.

² Thuc. IV, 129, 2-3.

is the site of Mende. A large flat-topped hill, dropping off to the sea in cliffs four hundred feet in height, constitutes the acropolis. On the east the descent is also abrupt, and only on the north does the hill slope off toward the plain more gently. The edge of the

acropolis is even here quite sharply marked. A small ravine separates the hill on the west from a much larger and higher hill beyond. This larger hill is called by the local inhabitants Barber (Fig. 1), and here were stationed the Mendaean and their allies under Polydamidas awaiting the attack of the Athenians. They were, according to Thueydides,¹ on a secure hill outside the city. And in another passage² he calls the hill "hard to approach." This hill is again separated on the west by a ravine from an equally high hill on the northern slopes of which lies Calandra (see Fig. 2).³

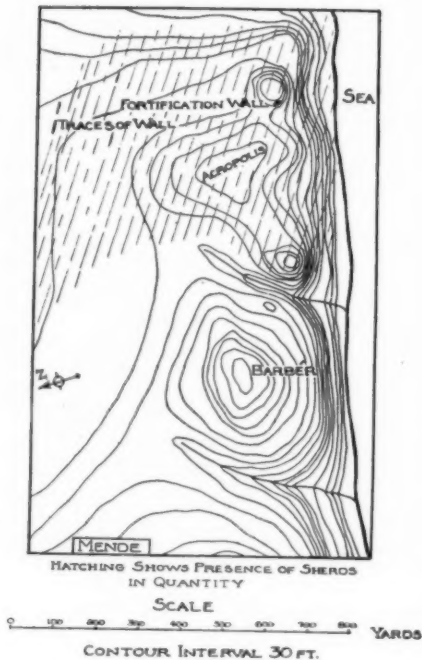


FIGURE 2.—SKETCH MAP OF MENDE.

The Athenian offensive was divided. Nicias advanced along a path while Nicostratus, by another approach, took a longer way around to the city.⁴ Down the ravine separating the two high hills runs even now a path which skirts along the shore to the sharp spit of land where the Athenians beached their ships. Several large well-worked blocks of stone

¹ Thuc. IV, 129, 3.

² Thuc. IV, 129, 4.

³ See map of Mende. This map and those of Scione and Torone are in general correct, but the detail of contour cannot be insisted upon. They were made without surveying instruments.

⁴ Thuc. IV, 129, 4 and 5.

on one of the low spurs of the hill which runs down to this point mark the site of the ancient Posidonium. This path is the direct approach from the Posidonium to the city, but rather difficult. The easy approach for an attacking force is around to the north of the hill on which Calandra lies, and it seems reasonable that this was the "other approach"¹ which Nicostratus took while Nicias had tried to advance along the path.²

After the failure of the Athenians they went back to their ships, and the Mendaeans retreated into the city during the night.³ The next move of the Athenians was to sail around the point to the side of the city facing Scione and to take the suburb,⁴ which lay below the acropolis to the east.

When the city was betrayed to the Athenians the Peloponnesians and their sympathizers took refuge in the acropolis.⁵ Thucydides mentions one gate in the outer wall, toward Potidaea,⁶ and through this Nicostratus entered, while Nicias came in from the direction of Scione. Traces of a wall of fourth century construction are still preserved in the fields a hundred yards to the north of the acropolis toward Potidaea, and the presence of fragments of pottery in the soil shows the extent of the city both in this direction and toward Scione.

The inhabitants of Calandra pointed out the hill behind their town as the one on which the Mendaeans encamped, and, other than Barber, it is the only possible hill. But of the two Barber is the only one which can qualify as hard to approach. It is quite steep to the north, precipitous toward the sea, and separated by ravines from the hill adjoining and from the acropolis. That it was outside the city seems clear from the almost entire absence of sherds in the soil. The hill behind Calandra slopes gently down to the village and offers an easy approach all the way to its summit.

The acropolis has two small elevations on the southwest and southeast sides, and the popular tradition of the village is that one or the other of these was the acropolis. Either one, however, would be very hard to cut off effectively from the main body of the hill, and they are both very small.⁷ Thucydides further mentions that the Peloponnesians in the acropolis were shut off by walls down to the sea on either side.⁸ If the Athenians had wished to wall off

¹ Thuc. IV, 129, 4.

² Thuc. IV, 129, 4.

³ Thuc. IV, 129, 5.

⁴ Thuc. IV, 130, 1.

⁵ Thuc. IV, 130, 6.

⁶ Thuc. IV, 130, 2.

⁷ The largest summit, to the southeast, measures about sixty yards across.

⁸ Thuc. IV, 130, 7.

one of these small knolls, it seems hardly reasonable that they should have gone to the trouble of running walls down to the sea. When we consider, however, that the whole flat-topped hill was the acropolis, we can understand how it was a saving of effort to drop the walls straight to the sea on either side rather than to attempt to enclose the side toward the sea as well by fortifications.

Apart from large blocks of limestone which seem to have fallen from the acropolis down to the shore, there is still preserved on the



FIGURE 3.—THE SEA TOWARDS SCIONE FROM THE ACROPOLIS OF MENDE.

western side of the knoll of the acropolis toward the east a small section of fourth century wall *in situ*.

Leaving the acropolis of Mende under siege, the Athenians proceeded to Scione,¹ a distance of fifteen kilometres along the coast. The plain between the low hills and the sea is about a hundred yards wide and quite fertile, but it narrows gradually toward Scione (Fig. 3) until the hills come down almost to the sea, broken only by the ravines which run inland. The site itself is on a hill just east of a small group of houses on the shore about half way between New Scione and Hagios Nikolaos, at a point where the shore bulges out slightly into the sea. Here again the defenders were encamped on a secure hill outside the city.² But the Athenians attacked with better success than at Mende and drove them within the walls. The process of circumvallation then began, for while the defenders

¹ Thuc. IV, 130, 7. See map of Scione.

² Thuc. IV, 131, 1.

held the hill before the city they could not be cut off by a wall.¹ As will be seen from the sketch map (Fig. 4), Scione was situated on one summit of a two-crested hill and on the slopes toward the sea. Potsherds of the classical period are abundant in the soil, and on the crest of the hill there are still preserved some remains of a fourth century tower. A steep descent of fifty feet or more leads down from there to the saddle between this hill and the crest to the north. The hill with the fortifications and the pottery fragments constituted the acropolis of ancient Scione and the hill beyond was that on which the defenders encamped "before the city." Both hills drop off abruptly to the ravine on the west, and toward the sea the descent is also steep. There is a more gentle but still a sharp slope to the east, and from the "strong hill" to the north the ridge continues inland. To wall off both hills would have been a tremendous undertaking, and the hope of the Athenians was to run their wall across the saddle and down to the sea on either side of the city. This was, of course, impossible when the defenders held the second hill, and it is exactly what the Athenians did when they had driven their enemies within the city.

Other remains of wall than those on the summit of the hill I could not find, but one of the wood cutters of the district showed me his vineyard on the acropolis and told of finding many large stones in the soil.

When Brasidas came back from the north he found the Athenians already in position at Mende and Scione, and so he resolved to guard Torone,² his base of operations in southern Chalcidice, and wait. It is about the location of this city that there exists an especial divergence of opinion (Fig. 5).

¹ Thuc. IV, 131, 1.

² Thuc. IV, 129, 1.

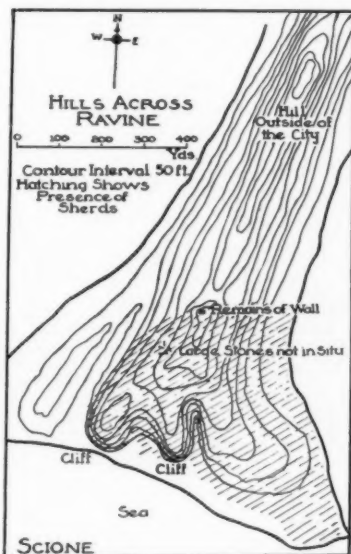


FIGURE 4.—SKETCH MAP OF SCIONE.

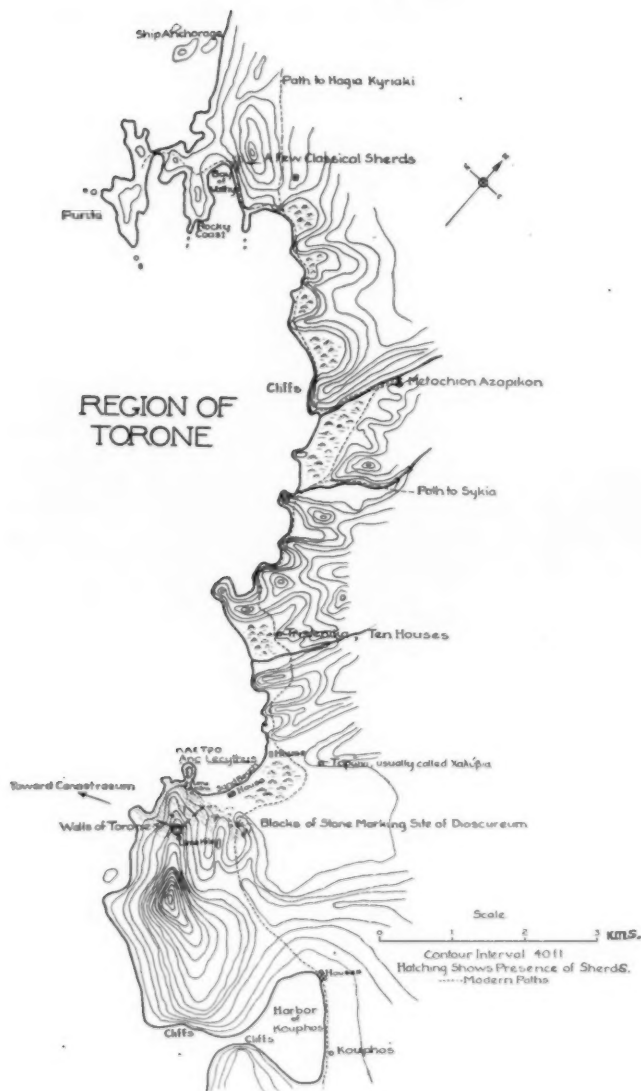


FIGURE 5.—SKETCH MAP OF TORONE AND VICINITY.

Colonel Leake distinguished the landlocked harbor near the southern end of the Sithonian peninsula as the *κωφὸς λιμὴν* of the ancients,¹ and from this view there has been no dissent.² The harbor (Fig. 6) is even at the present day the safe retreat for fishermen in time of storm, and the port of call for the Greek steamers plying to Sykia when the sea is too rough to permit their anchoring in the bay of Sykia itself. The other somewhat sheltered points along the west coast of Sithonia are very few.³ Among the islands north of the



FIGURE 6.—ENTRANCE TO HARBOR OF KOUFOS FROM OUTSIDE.

Punta there is a certain degree of security from the weather; and in the harbor of Balaban still farther north the *varkas* of the fishermen sometimes make their landing in case of necessity. At this point, however, the beach is quite open and the shelter is by no means as satisfactory as might be wished.⁴

The *κωφὸς λιμὴν*, on the other hand, offers in all weathers a comparative calm. The entrance is narrow, flanked on both sides by cliffs which rise perpendicularly from the water, and within the entrance the bay opens out, about a mile deep and a mile across. The hills gradually slope down and give place to the sand beaches toward the east. The name *κωφός* is preserved by the little

¹ Thuc. V, 2, 2.

² W. M. Leake, *Travels in Northern Greece*, Vol. III, p. 119.

³ See map of the region of Torone.

⁴ After a rough passage from Pallene on January 4, 1922, the fishermen with whom I sailed were forced to spend half an hour in making a safe approach.

collection of houses on the edge of the bay, which constitute one of the many "kalyvia" of Sykia. They are used largely for summer residence. This harbor is the only one on the peninsula which could in any modern sense of the word be designated as a harbor, and certainly there is no other which could at any time have been called *κωφός*.

Concerning Torone itself there is more uncertainty. Colonel Leake places the site at the modern town of *Τορῶνι*, and on his map writes the name just north of the *κωφός λιμὴν*.¹ Dr. K. F. Kinch, who visited Chalcidice early in the last decade of the nineteenth century, places the city about twenty minutes north of the *κωφός λιμὴν*.² Dimitsas places it also on the modern *Τορῶνι* and says that it was in a high and lofty position.³ Struck, who toured Chalcidice in 1901 and 1903, found some ruins near the bay of Vathy which he interpreted as those of Torone.⁴ He did not, however, go as far south as *κωφός*, but travelled across the peninsula to Sykia. Kiepert probably followed Struck in placing Torone on his map of Ancient Greece, Macedonia, and Epirus, in the corner of the bay of Vathy.⁵ Kontogenes, on his sectional map of Greece,⁶ places the ruins of Torone near the bay of Vathy, and the general map of greater Greece places them almost as far north as Balaban.⁷

From Thucydides' description of the battles at Torone⁸ there are several indications of what sort of situation the city must have had,

¹ W. M. Leake, *Travels in Northern Greece*, Vol. III, p. 155. Leake himself did not actually visit Torone.

² K. F. Kinch, 'De hellenske Kolonier paa den makedoniske Halvø, *Festskrift Thomsen*, København, 1894, p. 147.

³ Dimitsas, *ἡ Μακεδονία*, p. 616.

⁴ Struck, *Makedonische Fahrten, Chalkidike*, pp. 62 f. ". . . Mit 210 m. erklimmt der Weg den höchsten Punkt und senkt sich nach dem Metochion Asapikon und der Bucht Wathis herab, wo nahe an dem heute noch Toronis genannten Flecken im innersten Winkel des Küsteneinschnittes die geringen Ruinen von Torone liegen, nach dem der Golf von Kassandra einst Sinus Toronai-cus hiess. Etwas Mauerwerk und einige Marmorbalken zwischen Steinhäufen und Ziegelfragmenten kennzeichnen auf einem Hügel von geringer Ausdehnung die alte Stadtlage. . . . Bevor man Kufos erreicht soll in einem Talgrunde nahe der Küste eine kleine Ruine liegen, die den türkischen Namen Kale führt. Wir zogen es vor, den kürzeren Weg über eine Einsattelung (290 m.) des Kammes nach Sykia einzuschlagen, . . ."

⁵ Kiepert, *Formae Orbis Antiqui, Graecia cum Macedonia et Epiro*, XVI.

⁶ Published in Athens.

⁷ Published 1916, Stangel and Co., Athens.

⁸ Thuc. IV, 110-116; V, 2-3.

and he mentions several points, the identification of which helps in the establishment of the site.

Brasidas came from Acte, and encamped at the Dioscureum, three stades from the city.¹ Seven light-armed men entered the city by the wall toward the sea,² and passed the uppermost watchtower (for the city was on the side of a hill) and opened the gate toward Canastraeum.³ There were also gates⁴ by the market-place on the side of the city opposite the gate⁶ toward Canastraeum.⁶ And from the



FIGURE 7.—THE PROMONTORY OF LECYTHUS.

market the Athenian hoplites who were not killed in the attack fled, some by boat and some by land, to the promontory of Lecythus (Fig. 7) with its sanctuary of Athena, separated by a narrow isthmus from the city (Fig. 8).⁷

In the account of the recapture by Cleon Thucydides mentions that the city was not far from the *κωφὸς λιμήν*,⁸ and we may deduce from his narrative that boats sailing around from the *κωφὸς λιμήν* were not visible from the city until they had come very close upon it.⁹

The site which fulfills these requirements is on the northern slope of the hill which flanks the harbor of *κωφὸς* on the north.

¹ Thuc. IV, 110, 1.

² Thuc. IV, 110, 2.

³ The word is *πύλις*.

⁷ Thuc. IV, 113, 1-2.

⁹ Thuc. V, 3, 1.

² Thuc. IV, 110, 2.

⁴ The word is *πύλαι*.

⁶ Thuc. IV, 111, 2.

⁸ Thuc. V, 2, 2.

The hill itself towers well above the city and slopes down abruptly except on the north and east. On the east a low saddle connects it with the other hills of the peninsula,¹ and on the north, after a very slight saddle, it slopes down gradually to the sea. It is on this last northern slope that the ruins of Torone are preserved. The sandy beach which stretches out to the east and north is broken off suddenly by a rocky projection standing out toward the north from the main ridge of the hill, a hundred yards long and fifty yards across, called by the natives *castro* or *castella*, from the ruins of mediaeval



FIGURE 8.—PROMONTORY OF LECYTHUS FROM NEAR ISTHMUS.

fortification upon it. On the small round hill which closes the saddle on the north are still preserved *in situ* limestone blocks of a fourth century fortification wall, a round tower thirty feet in diameter, which probably occupied the site of the earlier "highest watch-tower" mentioned by Thucydides. From this tower the city walls may still be traced running down the sides of the ridge, covered with earth and overgrown with brush, but with blocks of limestone occasionally visible on the surface. These walls are of the same period as the tower, and quite easily traceable on the east, but on the west, where the slope is more precipitous, more difficult to follow. There are also toward the east some remains of terrace walls, likewise of fourth century construction.

¹ The saddle is so low that the bay of *καφός* is visible on the other side from the acropolis of Torone.

Ancient blocks, some of limestone and some of a coarse gray stone quarried in Sithonia, are everywhere in evidence. Many have been built into the mediaeval fortifications of the *castro*, and many have been used in the building of later houses, some ruins of which may still be seen to the east of the city. Near the *castro* are also two lime kilns, and there is still another near the watchtower on top of the ridge, which bear witness that many of the blocks have been broken up and burned. Potsherds of classical ware are abundant both within the walls and outside the walls for a distance of three or four hundred yards to the east.

To the north is the sea, and to the west the sea. The precipitous mountain to the south cuts off all approach by land from the direction of *κωφός* except across the low saddle mentioned above. This pass brings one down into the plain to the east of the city. No matter from where the enemy came an approach by land always brought the attacking force first to the eastern wall of the city. Brasidas, after his march from Acte, encamped three stades from the city and at that point, or near there, was the Dioscureum. To the east of the place where the eastern wall of Torone descends to the sea, to the south and east of what is now a marshy plain, are two low ridges, on the more easterly and lower of which are quite a number of well-worked blocks of stone (Fig. 9) that one of the peasants has found in his field there and dragged off to one side.¹ A few feet farther up the hill are three blocks of the coarse gray stone² which date from a still earlier period and which may have



FIGURE 9.—BLOCKS ON THE SITE OF THE DIOSCUREUM.

¹ There were eight blocks of approximately the same size, the best preserved of which I measured (130 by 48 by 42 cm.). Some of these blocks showed cuttings for hook clamps. There was also a flat slab (103 by 99, broken, by 26 cm.). Another similar slab was still buried in the field. They all seemed to have formed part of some late fourth or early third century building.

² Two of the blocks were of approximately the same size (73 by 48 by 19 cm. and 62, broken, by 48 by 19 cm.). The latter had a T clamp of early shape, quite probably from the fifth century. The third block was larger (46 by 25 by 112 cm.), but much weathered, and the original surfaces were almost entirely worn away.

been part of the very temple mentioned by Thucydides. At any rate it seems safe to assume that the blocks found on the hill mark the site of the Dioscureum. The distance from here to the wall of the city, about five hundred metres, compares favorably with the three stades given in the account of Brasidas' attack.

The seven light-armed men who were first introduced into the town entered by the wall near the sea, went up to the highest watch-tower, which was on the crest of the hill, and then opened the postern gate toward Canastraeum. The wall from the top of the hill slopes down to the west exactly in the direction of the tip of Pallene. The



FIGURE 10.—THE PROMONTORY OF LECYTHUS FROM THE ACROPOLIS OF TORONE.

market was on the other side of the ridge, toward the east, as Thucydides narrates¹ and as we should naturally expect. Here was the approach by land and sea, and here the ground was more nearly level. To the west the descent to the sea is rather abrupt. The gate to the west was small, a postern, while by the market were the main gates of the town. That the market was inside the city walls seems evident from the fact that the Athenian hoplites sleeping there were surprised in the rush *after* the gates had been opened. Lecythus was a bare hundred yards away (Fig. 10) and the retreat by land or sea must have been a matter of very short duration.

The suburb which Brasidas wished to enclose in the walls and which Pasitelidas tried to defend when Cleon attacked lay probably

¹ Thuc. IV, 111, 2.

between the wall from the acropolis to the sea on the east of the city and the Dioscureum. The ground here is fairly level and the fragments of pottery show that it was inhabited in classical times. Moreover, the one approach to the city lay on this side, and Cleon encountered the defenders in the suburb before he arrived at the city proper.¹ The boats sailing around from the *κωφός λιμὴν* could come to within a row of four or five minutes of the town before the guards even on the acropolis could see them, and it is not difficult to understand how they anticipated Pasitolidas before he could effect his withdrawal to prevent their landing.

There is marked on the sketch map the group of houses that are usually called *kalyvia*, and sometimes *Τορῶνι*, but there is no fixed habitation and the place is usually deserted in winter.

From Torone to Balaban I spent two days in searching for the ruins that have sometimes been taken for those of Torone, especially near the bay of Vathy. The inhabitants of the one house in the neighborhood knew of no ruins, and I was able to find only a few classical sherds on the spot marked on the map in the corner of the bay. Farther out toward Punta and beyond the narrow isthmus were only a few sherds of nondescript character.

If Torone had been near here, Cleon in his attack would have had a hard three hours' march over sandbars and rocky promontories, and Pasitolidas would have had the whole Athenian fleet in view as they sailed from the *κωφός λιμὴν* to the city, a distance of twelve kilometres. He certainly should have been able to get from the proasteum back into the city before they arrived.

There are here also two promontories like that of Lecythus, but they show no traces of habitation.

Farther north, at Hagia Kyriaki, the monk in charge of the metochion of the Esphigmenou monastery² guided me about the cove, and the only remains which we found consisted of foundations built of slabs of local stone and cement, and abundant sherds of coarse, red, nondescript pottery, all of which were on the little point to the north of the cove. Some years ago, however, I was told, a marble stele was found on this point and taken to the monastery on Mt. Athos.³

¹ Thuc. V, 2, 4.

² The metochion is now down by the sea, and not inland as formerly, and as represented on the maps.

³ The stele has, exclusive of the tenon at the bottom, overall dimensions of 42 by 50 by 15 cm. On a sunken field on one side is a sculptural representation of a

The first plain of any considerable size after we pass north from the district of Torone is at Balaban, and here too is a somewhat sheltered beach suitable for the drawing up of ships. On the low hills about the plain are many traces of mediaeval habitation, and on the high hill to the east known as Castella there is a crudely built wall of defense, dating apparently from Turkish times. Toward the sea from here, however, between the Castella and the hill of Hagios Ioannes, is another hill on which classical potsherds are quite numerous. That the site was one inhabited for many years is shown by the variety of coins collected by the monks of the neighboring motochion, ranging from the third century B.C., to the Byzantine period. A grave stele from Roman times, similar to that found at Hagia Kyriaki, was discovered in the fields at Balaban, and is now preserved in the library of the monastery of St. Gregory on Mt. Athos.

The remains to the north, however, are very scanty, and an identification of the sites is difficult. Negatively, we may be sure that no one of them was the chief city of Sithonia. The site described above, on the northern slope of the hill to the north of the *κωφὸς λιμὴν*, corresponds so exactly with Thucydides' description of Torone, both in its topographical contour and in the remains of antiquity still preserved there, that it may be designated with certainty as the site of the ancient city.

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man, a woman, and a boy (to the left) on an altar. The top is, unfortunately, broken away. The stele may date at about the turn of the Christian era, but the workmanship is very poor. Below the sculpture an inscription is faintly visible.

ΑΡΙΣΤΟΚΛΕΙΑΝ ΣΤΟΒΟΣ
ΧΑΙΡΕ

The doubtful letters are indicated.

1923
January-June

ARCHAEOLOGICAL DISCUSSIONS¹

SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN CURRENT PUBLICATIONS

SIDNEY N. DEANE, *Editor*
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GENERAL AND MISCELLANEOUS

Prehistoric Man.—HARRIS H. WILDER is the author of a new manual on prehistoric man, designed for the use of the college student and the general reader. In the first chapter the evidence on the chronology of the earliest phases of human existence in their relation to the several glacial and inter-glacial periods is presented. The following chapter, entitled "Material and Methods," shows how the age of monuments of prehistoric date is determined, and discusses the principal types of these monuments: caves and cave-paintings; kitchen-middens; remains of houses and hearths; tree-houses and lake-dwellings; crannogs; forts and scharrachs; megalithic monuments; graves and burial places; town and city sites, etc. The evolution of human culture from the Eolithic age to the Hallstatt and La Tène periods is traced in Chapter III. A short chapter is devoted to the prehistoric cultures of Asia, Africa, and the Oceanic Islands; while that of the two Americas is the subject of much more extended treatment in the fifth chapter. The discussion of American archaeology embraces stone implements; articles of bone, shell, etc.; metal work; pottery; architecture; petroglyphs and other forms of writing. The final chapter reviews the evidence on the physical type of prehistoric man. The exposition of the subject is assisted throughout by numerous cuts and diagrams. [*Man's Prehistoric Past*. By HARRIS H. WILDER. New York, 1923, Macmillan. xvi, 463 pp.; 111 figs. Svo. \$5.]

East European Relations of the Dimini Culture.—In *J.H.S.* XLII, 1922, pp. 254-275, V. G. CHILDE examines the evidence for the theory that the intrusive culture of certain late neolithic sites in Eastern Thessaly belongs to the cultural province of Eastern Europe rather than to that of Central Europe, and finds it conclusive. These invaders, approximately contemporary with Early Cycladic, seem to have come from the north by a route east of the Balkans, leaving a part of their forces in Eastern Bulgaria, and to have gone no farther than into Eastern Thessaly. The East European culture, with many local and temporal variations (for the neolithic period was of very long duration) is found in the Kiev Govern-

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor DEANE, Editor-in-charge, assisted by Professor SAMUEL E. BASSETT, Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Dr. T. A. BUENGER, Dr. STEPHEN B. LUCE, Professor HAROLD N. FOWLER, Professor ELMER T. MERRILL, Professor JOHN C. ROLFE, Dr. JOHN SHAPLEY, Professor A. L. WHEELER and the Editors.

No attempt is made to include in this number of the *JOURNAL* material published after June 30, 1923.

For an explanation of the abbreviations, see pp. 128-129.

ment of southern Russia, in Bessarabia, Bukovina, Transylvania and Galicia, and in some border sites it shaded into the Central European culture of Bohemia, Moravia, Hungary, Austria, Bosnia, Italy and Western Germany. Its people defended their settlements by walls or elevated position; they kept domestic animals and tilled the ground; they lived in rectangular wattle-and-daub houses of which the plan contains the germ of the megaron; they used many more artifacts of bone and horn than of stone; in their pottery, of several different styles, painted decoration was more frequent than incising, and the basic form-element was the inverted cone; they made clay models of animals and their nude female idols had roughly finished heads; above all, the ground principle of their decoration was the use of geometrical designs based on the spiral and the meander before the spiral was used in Crete; with these strongly conventionalized naturalistic motives are occasionally found. In their chalcolithic period they seem to have had their first lessons in metallurgy from Troy. Such analogies as exist between the two cultural provinces (Eastern and Central Europe) suggest a common origin, perhaps in a pre-ceramic stage.

Neolithic Industry and the Near East.—In *Syria*, IV, 1922, pp. 23-37, JACQUES DE MORGAN calls attention to the danger of assuming for prehistoric Mediterranean or Levantine countries the same succession of cultural periods which has been recognized in western Europe. His researches have led him to the conviction that there was no neolithic industry in Mesopotamia or on the east slope of Anti-Lebanon. He would also attribute to an aeneolithic culture the Egyptian deposits which he formerly considered neolithic. He denies true neolithic industry to Crete, bringing forward in this connection a number of arguments in opposition to M. Dussaud. The earliest colonists of the Aegean islands brought the use of copper with them. In the Syro-Arabian desert a hiatus must be assumed between the palaeolithic and aeneolithic cultures. An entirely new study is needed of the cultural development, not only of the Aegean region and Syria, but of all Nearer Asia.

Masks and Nodding Images in Egypt and in Western Asia.—In *Z. Alttest. Wiss.* XI, 1922, pp. 75-137, H. GRESSMANN completes a study begun by G. Hoffmann of oracular media connected with the cult of the dead. He discusses the masks that were in general use throughout the ancient world, and finds traces of these in the Old Testament in the "covering" that Moses is said to have worn over his face when he came forth from interviewing Yahweh, and in the covering of the head by other prophets. He then gathers a large number of instances throughout the ancient world of images that revealed the will of the indwelling deity through nodding or through other motions. The Hebrew *teraphim*, he holds, were images of this sort. Perhaps they also were used for holding the ancestral masks. The word *teraphim* he derives from the root *raphaph*, "sway," with reference to the motion of the image in giving responses.

Neolithic Solar Religion in Babylonia and Egypt.—In *Mitt. Vorderas. Ges.* XXVII, 3, 1922, pp. 1-42 (5 figs.), H. SCHNEIDER seeks to show that the religion of neolithic man in Europe was the worship of the sun. Its symbol was two disks representing the two halves of the year. This symbolism is fully developed in North European monuments about 2000 B.C., at the beginning of the Bronze Age, and it can be traced back into the Stone Age in which it had its origin. The same symbolism meets us in the earliest Babylonian monuments from Fara and in the pre-dynastic art of Egypt. This leads to the conclusion that both Sumerians and

Proto-Egyptians migrated from the north in the fourth millennium B.C. and brought with them neolithic civilization and religion that were already fully developed in Northern Europe and Asia.

A History of Sculpture.—In the series of manuals of the history of art published under the direction of M. Henry Marcel, one of the most recent is a work on ancient sculpture by CHARLES PICARD, Director of the French School at Athens. It is unusual, perhaps unique, in its scope, since it pictures the evolution of plastic art from the most remote prehistoric period to the age of Phidias. The text is divided into five books, the first of which is a discussion of sculpture from the quaternary period to the neolithic. The five chapters of the second book are devoted to the general characteristics and the historical development of Egyptian sculpture. In the following book the facts of Chaldean, Hittite, Assyrian, and Persian sculpture are presented. The plastic art of the Aegean peoples of the Bronze Age and of other early Mediterranean peoples is discussed in Book IV. The last book, naturally the longest, is devoted to Greek sculpture. An introductory chapter presents its general characteristics; and the following chapters deal with the Dorian, Ionian, and Attic schools of the archaic period, the art of the first half of the fifth century, and the work of Polyclitus, Myron, and their pupils. Each chapter of M. Picard's book is provided with an extended bibliography, probably more complete than those in any other general work on ancient sculpture. A unique feature is a detailed chronological table of twelve pages, in which the principal sculptures of the periods discussed are listed (with dates, so far as possible) in five parallel columns, the first of Egyptian monuments, the second of Mesopotamian and Assyrian, the third of the sculptures of Asia Minor, Syria and Palestine, the fourth of those of Greece and the Aegean region generally, and the fifth of Italian and other occidental works. The half-tone figures show many departures from the conventional choice of illustrative material, and include some recently discovered works, e.g. the seated goddess from Locri in Berlin; the stele of the youth crowning himself, from Sunium; and one of the recently discovered reliefs from the Themistoclean wall. [*La Sculpture Antique, des origines à Phidias*. Par CHARLES PICARD. (Manuels de l'histoire de l'art.) Paris, 1923, H. Laurens. 428 pp.; 121 figs. 4to. 25 fr.]

Camphor.—In *J.A.O.S.* XLII, 1922, pp. 355-370, WILFRED H. SCHOFF gives an account of the natural camphor of Sumatra and Borneo; of the method of gathering it, its uses among the natives of the islands, the early Mohammedan commerce in camphor, and its association with Mohammedan religion. The name is of Malay origin. In a postscript a curious native myth of the origin of camphor is related, and the ritual practices connected with the search for camphor in Sumatra are described.

EGYPT

Egyptian Literature.—*Die Literatur der Aegypter*, by ADOLF ERMAN, was written not for the small circle of Egyptologists, but for the large company of persons interested in the ancient world, to whom Egyptian literature, because widely scattered in technical journals and books, has hitherto been inaccessible. The book includes the principal literary texts of the third and second millennia B.C., but not the medical and mathematical texts. It excludes the demotic texts of the Ptolemaic and Roman periods. A highly condensed outline of Egyptian history precedes an Introduction in which the following topics are considered:

The Development of the Literature, The Learned Scribes, Singers and Raconteurs, Writing and Books, Our Understanding of Egyptian Texts. Specimens are given of hieratic writing of the Middle and New Kingdoms, each with hieroglyphic transcription and translation. An analytical table of contents enables the reader to locate readily any one of the texts translated and at the same time to see its chronological position and the class of writings to which it belongs. Each section of the body of the book opens with an introductory paragraph and each translation is preceded by necessary explanatory matter. The older texts antedating the sixteenth century B.C. occupy 171 pages and include poetry, tales, moral precepts, reflections and lamentations. The texts of the New Kingdom cover 188 pages and embrace poetry—hymns to king and gods, love songs, and other songs—fairy tales, and the writings emanating from the schools, such as admonitions addressed to the pupils and both genuine and fictitious letters which were to be copied as models of style. This literature deserves to be known, not only as the oldest body of writings developed on this earth, but for the glimpses it gives of an active intellectual life and of a poetry which are worthy to be considered side by side with Egyptian accomplishment in the major and in the practical arts. [*Die Literatur der Aegypter: Gedichte, Erzählungen, und Lehrbücher aus dem 3. und 2. Jahrtausend v. Chr.* Von ADOLF ERMAN. Leipzig, 1923, Hinrichs. xvi, 389 pp.; 8vo. \$1.50.]

Bibliography of Egyptian Religion.—In *Arch. Rel.* XXI, 1922, pp. 440-484, A. WIEDEMANN gives an elaborate review of all the books and articles on Egyptian religion that have appeared during the years 1914-1921.

Egyptian Hieroglyphics.—In the fourth edition of his *Easy Lessons in Egyptian Hieroglyphics* (Books on Egypt and Chaldaea, Vol. III. London, 1922, Kegan Paul, Trench, Trubner & Co., Ltd. 246 pp.), Dr. E. A. WALLIS BUDGE reprints his well-known book published in 1910. He gives an account of hieroglyphic writing, the Rosetta Stone and the decipherment of hieroglyphics, hieroglyphics as ideographs, phonetics and determinatives; then publishes a rather long list of hieroglyphic characters with their phonetic values; then discusses grammatical forms, pronouns, nouns, the article, adjectives, numerals, the verb, adverbs, prepositions, conjunctions and particles; and finally gives four extracts for reading, with transliteration and translation.

The Egyptian Gods Horus and Set.—In *Mitt. Vorderas. Ges.* XXVIII, 1923, pp. 1-72, H. KEES contests the current opinion that Horus and Set were originally the gods of Upper and of Lower Egypt respectively, and that their conflict reflects the strife between the two kingdoms in pre-historic times, and maintains that the two falcon-gods were already united in a pair in pre-dynastic times, and that both were originally deities of Upper Egypt. After the conquest of Lower Egypt by Upper Egypt the myths of these gods were reinterpreted so as to narrate the history of the conquest.

Handbook of the Egyptian Collection at Chicago.—The Art Institute of Chicago has published a handbook of its Egyptian collection, prepared by THOMAS G. ALLEN with the coöperation of the Oriental Institute of the University of Chicago. The introduction comprises a brief outline of Egyptian history and a chronological table. Successive chapters deal with the following divisions of the collection: coffins and their accessories; relief sculpture; statues and statuettes; ushabtis; pottery; glazed ware; minor arts in stone, metal, wood; beads, amulets, scarabs, papyri; and Graeco-Egyptian paintings. The book is illustrated with numerous

halftone cuts, and is provided with indexes which facilitate its use as a guide to the collection. [*The Art Institute of Chicago: a Handbook of the Egyptian Collection*. By THOMAS GEORGE ALLEN. Chicago, 1923, University of Chicago Press. 173 pp.; figs.; 8vo. \$1.50.]

Egyptian Furniture.—In the *New York Historical Society Quarterly Bulletin*, VII, No. 1, April, 1923, pp. 3-9 (9 figs.), Mrs. C. R. WILLIAMS describes the contents of a case recently installed in the Egyptian exhibition of the New York Historical Society. It contains a number of small objects associated with the reigns of Tut-ankh-amon and his immediate predecessors, including a stool-leg with an inscription of Amenhotep IV, and a marriage scarab of Amenhotep III; also a tube for cosmetics inscribed with the name of Queen Tiy. The larger objects of furniture in the case include a chair and a stool similar to articles found in the tomb of Tut-ankh-amon. More important than these is a six-spoked chariot wheel of strong wooden construction, to be dated also in the period of the New Empire, not earlier than 1600. This object, which came to New York with the Abbott collection, is the only one of its kind known.

The Heretic King Echnaton.—In a work entitled *König Echnaton in El-Amarna*, CLARA SIEMENS gives sixteen drawings in which she successfully translates the scenes depicted in the tombs of Tell el-Amarna into the terms of modern art, and gives a vivid picture of life at the court of the famous heretic king of the eighteenth dynasty who tried to impose a solar monotheism upon Egypt. The accompanying text by GRETHE AUER is the imaginary story of an artist who flourished at the court of the king and who is supposed to have produced the drawings. [*König Echnaton in El-Amarna*. Text, 23 pp., by Grethe Auer; 16 plates by CLARA SIEMENS. Leipzig, 1922, Hinrichs. Folio. \$2.00.]

BABYLONIA AND ASSYRIA

Babylonian Chronology.—In *J. Soc. Or. Res.* VI, 1922, pp. 121-129, E. F. WEIDNER gathers up all the latest evidence, and reconstructs the lists of kings of the Dynasty of Akkad and of the Kassite dynasty of Babylon.

Movable Types in Ancient Babylonia.—In *Z. Assy.* XXXIV, 1922, pp. 157-161, (4 figs.), O. SCHROEDER shows that the ancient Babylonians had not only seals and stamps with which they impressed whole inscriptions upon clay, but that they had also movable types with which they set up characters and put together composite signs. This is proved by misprints, by characters turned upside down, and by signs that have come loose and fallen apart in the process of printing. The idea thus existed three millennia before Gutenberg gave it practical application in the modern art of printing.

Akkadian-Hittite Bilingual Tablets.—Among the numerous cuneiform tablets discovered at Boghazkeui, the ancient Hittite capital in Asia Minor, were several bilinguals in Akkadian, or Semitic Babylonian, and Kanisian, the language of the ruling Hittite dynasty. On account of their fragmentary condition these are not so useful as might be expected. Still they furnish a valuable check upon the results gained by other methods of Hittite decipherment. They are published in transcription and translation by A. GÖRZE, in *Z. Assy.* XXXIV, 1922, pp. 170-188.

Bibliography of Assyriology.—In *J. Soc. Or. Rès.* VI, 1922, pp. 74-87, J. A. MAYNARD enumerates the important works and articles on Assyriological subjects

that appeared during the year 1921, and gives a brief summary of the contents of each.

New Historical Material on Ashurbanipal.—In *J. Soc. Or. Res.* VI, 1922, pp. 99–105, J. A. MAYNARD gives in transcription and translation the new records of Ashurbanipal that have been published since Streck's standard edition of the inscriptions of this king.

Liturgical Elements on Babylonian and Assyrian Seal Cylinders.—In *J. Soc. Or. Res.* VI, 1922, pp. 106–116, S. A. B. MERCER seeks to gather from the seals all the elements that throw light on the Babylonian ritual. Among these belong: the posture of the deities, and of their worshippers, priests, and attendants; ritual acts or gestures, and vestments; the various kinds of sacrifice, and the manner of presenting them.

Pre-Greek Coinage in the Near East.—In an extant inscription published in 1909 Sennacherib speaks of the casting of half-shekels in moulds of clay as a familiar process. No such early coins are known, but SIDNEY SMITH argues that they may have been of the type of certain disks of lead bearing ornamental designs, and that these leaden objects were probably coins. In a footnote the Editors of the *Num. Chron.* register certain doubts about these disks being coins, since they lack an inscription at a time when inscribed weights were familiar. The leaden pieces may have been ornaments, counters, or draughtsmen. (*Num. Chron.* 1922, pp. 176–185; fig.)

"Nineveh" in the Book of Tobit.—In *J. Bibl. Lit.* XLI, 1922, pp. 237–245, C. C. TORREY discusses the problem of the location of "Nineveh" in the Book of Tobit. This city is described as lying on the opposite side of the Tigris from the important city of Kasereïn. No such city lay opposite to the real Nineveh; but Seleucia, opposite to Ctesiphon, fulfils all the conditions. In journeying from Ecbatana to Seleucia, Tobit is said to have halted by the Tigris on the evening of the first day. This would not have been true of a traveller from Ecbatana to the real Nineveh, but would have been true of one going from Ecbatana to Seleucia. In the light of these facts it seems probable that *Κασερεϊν* in Tobit is a corruption of *Κασιερεϊν*, Ctesiphon. The true site of Nineveh was early forgotten, and it is quite possible that the Jews conjecturally identified it with Seleucia, the most important city of the region in the Greek period.

The Inscriptions and Languages of the Hittite Empire.—In *Z. Morgenl. Ges.* LXXVI, 1922, pp. 174–296, E. FORRER gives an elaborate account of the origin, characteristics and contents of the inscriptions from Boghazkeui, as far as they have yet been published and deciphered. He describes the localities in which the tablets were found, their number, size, material, and the general character of their contents. He then discusses the methods of the scribes in numbering tablets of consecutive works and in providing them with titles; writing with stylus and with ink, drawings that accompany the text, and the age of the tablets. Finally there is an investigation of the eight languages in which these inscriptions are written: (1) Sumerian, the primitive non-Semitic language of Babylonia; (2) Akkadian, or Semitic Babylonian; (3) Kanisian, or "Hittite," the language of the ruling dynasty in which the majority of the texts are written; (4) Luvian, which occurs almost exclusively in incantations; (5) Harrian, which occurs in invocations in Kanisian texts and in a few complete tablets, and is closely related to the language of Mitanni as found in the Amarna letters; (6) Proto-Hittite, which is distinguished from all the other languages of Boghazkeui in the fact that it indicated its gram-

mathematical relations by prefixes. This language could not have been deciphered but for the fact that the scribes already found it difficult and appended to the texts notes on the possible translation into Kanisian; (7) Balān, found only in connection with proverbs; (8) Mandeian, or Proto-Median. This was the language of an Indo-European race, and in these tablets occur the names of the gods Mithra, Varuna, Indra, and Nasatya.

The Hittite Language.—In *Z. Morgenl. Ges.* LXXVII, 1922, pp. 153-173, J. FRIEDRICH subjects the evidence in regard to the character of the Hittite language as shown in the tablets from Boghazkeui to a searching criticism, and comes to the conclusion that grammatically Hittite certainly belongs to the Indo-European family of languages. In vocabulary a few words are clearly Indo-European, but the great majority are of other origin. As early as 3300 years ago Hittite already stood lexically upon the level of modern Albanian or modern Persian.

SYRIA AND PALESTINE

Bibliography of Old Testament Archaeology.—In *J. Soc. Or. Res.* VI, 1922, pp. 134-152, S. A. B. MERCER gives a bibliography for the year 1921 of the archaeology of Palestine, including so-called Biblical archaeology, or Hebrew manners and customs.

Guide to the Holy Land.—Father B. MEISTERMANN has published a second edition of his *Guide de Terre Sainte*. (Paris, 1923, A. Picard. 749 pp.; 23 maps; 115 plans. 25 fr.). After a brief statement of the general information useful to the tourist he describes the route from Marseilles to Palestine by way of Egypt, the journey from Jaffa to Jerusalem, gives an account of Jerusalem and the various excursions from it, Bethlehem, Haifa, Nablous, Beyrout, Damascus, and finally the return to Marseilles by way of Smyrna, Constantinople and Athens. Two selections from the Psalms and several selections from the New Testament are added in an appendix.

Chronology of Palestinian Archaeology.—The directors of the four schools of archaeology in Jerusalem have agreed upon the following division of periods which is published in *Pal. Ex. Fund*, LV, 1923, pp. 54-55:

- I. Stone Age—
 - i. Palaeolithic
 - ii. Neolithic
- II. Bronze Age—
 - i. Early Canaanite, to 2000 B.C.
 - ii. Middle Canaanite, 2000-1600 B.C.
 - iii. Late Canaanite, 1600-1200 B.C.
- III. Iron Age—
 - i. Early Palestinian, 1200-600 B.C.

{	(a) Philistine
{	(b) Israelite
{	(a) Jewish
{	(b) Hellenistic
{	(a) Roman
{	(b) Byzantine
 - ii. Middle Palestinian, 600-100 B.C.
 - iii. Late Palestinian, 100 B.C.-636 A.D.
- IV. Modern—
 - i. Early Arab, 636-1100 A.D.
 - ii. Middle Arab, 1100-1500 A.D.
 - iii. Late Arab, 1500-

Megalithic Remains in Palestine.—In *R. Bibl.* XXXI, 1922, pp. 590-602 (2 pl.; 9 figs.), F. M. ABEL shows that megalithic remains are not confined to the region east of the Jordan, as is commonly supposed, but also exist in considerable numbers west of the Jordan. At Deir el-Musallabeh near Jerusalem; on the road between Jeba' (Geba') and Mukhmas (Michmash), at Jifneh, a little further north; on Mount Gerizim; and in the Wady Qana, there are dolmens, sepulchral chambers, raised tombs, and walls of a genuine megalithic character.

Egyptian Influence on the Hebrews.—In *R. Bibl.* XXXI, 1922, pp. 481-488, G. LEFEBVRE calls attention to the fact that the Egyptian funerary inscriptions, proverbs, hymns, and prophetic literature present many parallels to the Old Testament, particularly to the Wisdom Literature. This can be explained, he thinks, only by knowledge on the part of later Hebrew thinkers of the tenets of contemporary schools of Egyptian philosophy.

ASIA MINOR

The Construction of the Mausoleum.—In *Bonn. Jb.* 127, 1922, pp. 84-105 (pl.; 6 figs.), E. KRÜGER publishes a new theory of the construction of the Mausoleum (Fig. 1). The principal features of his restoration are: at the base, a series of steps, forming a truncated pyramid; above this, the vertical walls of the tomb chamber, possibly decorated with two of the sculptured friezes; next, 36 Ionic columns, arranged in two rows which form a pteron, but not enclosing any cella,

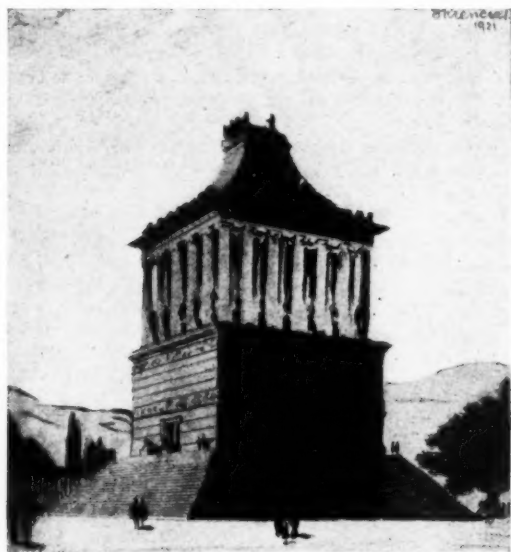


FIGURE 1.—RESTORATION OF THE MAUSOLEUM, BY E. KRÜGER.

and by its light effect justifying the words *pendere aere vacuo* applied by Pliny to the superimposed pyramid; then the pyramid itself, the profile of which was not straight, but concave, finally rising steeply to form a wide platform for the quadriga.

Lydian Ointment Jars.—In *Ath. Mitt.* XXXV, 1920, pp. 163–170 (pl.), A. RUMPF argues that the small *craterisci* showing “marbling” technique, found at Sardis and made in the sixth century B.C., contained the popular Lydian ointment, *βάκκαρις* (Hesychius, s.v.; cf. Athenaeus, XV, p. 690 b). They were exported to Greece and Italy, where the form was imitated and the technique and decoration were greatly improved. The author sees no need for recognizing as Butler does (*A.J.A.* XVIII, 1914, p. 435), a sharp break in the development of Lydian pottery caused by the fall of Croesus. He also denies all intimate relations between Lydian and Etruscan art and culture in the sixth century. If the Etruscans were emigrant Lydians, they had by this time lost all feeling for their former home.

Studies in the Topography of Ephesus.—In *Jh. Oest. Arch. I.* XXI–XXII, 1922, pp. 96–112, J. KEIL shows that the original settlement of Androclus at Ephesus was on the north side of the Panajirdagh; that a second settlement named Smyrna lay between the Panajirdagh and the east end of the Bülbüldagh on the site of a pre-Greek town. After the siege by Croesus Ephesus was confined to the plain between the old harbor of Coressus and the Artemisium. After the old harbor became blocked up Lysimachus changed the position of the town so that it could have access to the sea, but the fever from the swamps eventually forced the people to remove to the vicinity of the Artemisium and to the hill of Aiasoluk.

Ortygia, the Birthplace of the Ephesian Artemis.—In *Jh. Oest. Arch. I.* XXI–XXII, 1922, pp. 113–119, J. KEIL locates Ortygia, the birthplace of the Ephesian Artemis, in the grotto at the source of the Deirmendere, four or five hours walk from Ephesus. This identification had previously been made by Texier.

GREECE

ARCHITECTURE

The Construction of the Parthenon.—In *Architecture*, XLVII, 1923, pp. 177–180 (pl.; 11 figs.) and XLVIII, 1923, pp. 241–244 (5 figs.), WILLIAM BELL DINSMOOR reviews a number of recent theories of the proportions of the Parthenon, and presents his own conclusions regarding the procedure of the builders. Among the principal types of theory are the “module” and “gridiron” systems which assume commensurable dimensions in the building. Stuart announced that the temple platform had the proportions of 4:9; and most later theorists have followed his example in stressing too much the importance of this rectangle in the minds of the builders. Another class of theory denies the applicability of a linear unit to the Parthenon, and claims for it a geometric construction. The best known theory of this class is Mr. Hambidge’s system of dynamic symmetry. Mr. Dinsmoor finds that in the actual application of Mr. Hambidge’s analysis to the building, the significant lines of the analysis are so far from coinciding with important lines and points of the building that one can hardly call the discrepancies negligible errors. Another group of investigators have employed various regular polygons in the analysis of the Parthenon, with results which are often obviously fantastic, and never convincing. The key to the problem of the construction of

the Parthenon is to be found in the text of Vitruvius, who says that Greek buildings were laid out on the basis of the foot-rule. In the building of the Parthenon this rule had the Attic length of $12\frac{1}{2}$ inches. The lower diameter of the column was of fundamental importance in determining the measurements of the building. In the case of the Parthenon this measurement was given by the column-drums of the unfinished Themistoclean temple, since for the sake of economy the architects were required to use these and other blocks of the earlier building. The intercolumnar space was obtained by adding a cubit to the column-diameter, and making a slight correction which produced the ratio of 4:5 between column-diameter and interval. In order to give space for the great image by Phidias, the temple had to be wider than the early one; so a façade of eight columns was planned; and the length of the side was obtained by the usual practice of adding one to double the number of columns of the front. Mr. Dinsmoor calls attention to a number of slight errors in the construction of the building. He concludes that "the juxtaposition of members carefully proportioned to one another, and marvellously refined in detail, produced a whole, the general proportions of which could not have been foreseen at the beginning."

Problems of the Proskenenion.—The history of the proskenenion is the subject of renewed discussion by JAMES T. ALLEN (*University of California Publications in*



FIGURE 2.—RESTORATION OF THE SOPHOCLEAN PROSKENION BY JAMES T. ALLEN.

Classical Philology, VII, No. 5, 1923, pp. 197-207; 3 figs.) He accepts the recent assertion of Von Gerkan (*Das Theater von Priene*, p. 121) that in the development of the proskenenion the engaged columns attached to square pillars are early, while the complete columns belong to a late phase of the structure and are not designed to frame *pinakes*. Professor Allen observes that this conclusion is confirmed by the relatively narrow intercolumnar space in the proskenenion of the later Hellenic theatres. On the other hand, he disagrees with Von Gerkan's theory of the Peloponnesian origin of the proskenenion (*ibid.* p. 126). He believes that in the Aeschylean theatre at Athens the *skene* was on the orchestra terrace, back of the line of the chord which connected the *paradoi*, and that the remaining area determined the size of the orchestra. Rooms were erected at the sides outside the circle of the orchestra (*paraskenia*) and these were later connected by a narrow structure which replaced the original *skene*. About 440 B.C. the whole structure was shifted a little to the north and west, but the dimensions of the great circle, the orchestra and the scene-building remained the same. The Sophoclean theatre also had a narrow structure between the *paraskenia*; and this was the proskenenion (Fig. 2). Reviewing Flickinger's theory of the origin of *paraskenia* and proskenenion, Mr. Allen finds it substantially in agreement with his own.

SCULPTURE

Archaic Reliefs.—In *Art Bulletin*, IV, 1922, pp. 139–143 (3 figs.), A. D. FRASER discusses the two bases of Pentelic marble recently found in the Themistoclean wall. The date of about 500 B.C. is accepted and the analogy to vase-painting is indicated. (See also A. DELLA SETA in *Dedalo*, III, 1922, pp. 207–227; pl.; 9 figs.; *ibid.* pp. 409–423; pl.; 5 figs.; and A. PHILADELPHUS, in *J.H.S.* XLII, 1922, pp. 104–106; 2 pls.; cf. *A.J.A.* XXVI, 1922, pp. 355–356, fig. 3–8.; *ibid.* XXVII, 1923, pp. 201–202.)

The Hockey-Players of the Newly Discovered Stele Base.—In *Ἀρχ. Δελτ.*, 1922, pp. 55–59 (fig.), GEORGIOS P. OIKONOMOS utilizes the hockey-players of the recently discovered archaic relief in Athens in the interpretation of the unusual word *κερητίζων* in Plutarch's life of Isocrates (4), where it is said that the orator engaged in the game or sport implied by this word, and hence, in a statue which represented him as a youth, and was set up in the ball-ground of the Arrephori, was shown as *κερητίζων*. The word has usually been emended to read *κελητίζων*. But there would seem to be no point in placing a statue of a youth on horseback in a ball-ground. Mr. Oikonomos, therefore, maintains that in this Greek word we have the name of the sport represented on the relief from the Themistoclean wall. Hesychius' curious explanation of the word as equivalent to *βασιλίσαι* is explained by the strenuousness of the exercise involved in the game. It is further conjectured that the *pueri celerizantes* attributed by Pliny to Canachus and Hegias (*N.H.* XXXIV, 75, 78) were really *ceretizantes* or hockey-players; and that the relief in Athens is an imitation of a work of Canachus.

The Position of the Figures in the West Pediment of the Temple at Aegina.—In *Jh. Oest. Arch. I.* XXI–XXII, 1922, pp. 83–95 (pl.), H. SCHRADER proposes a new arrangement of the figures in the west pediment of the temple at Aegina. He argues for the following variation from Furtwängler's arrangement, using his numbering: A, L, H, M, F, E, G, a duplicate of F facing to the left, B, a duplicate of H facing to the left, C and N.

Locri Epizephyrii and the Ludovisi Throne.—Noting certain analogies of style and subject, particularly the ritual of robing and disrobing an underworld goddess, B. ASHMOLE brings together the Locrian terra-cottas, the pedimental or acroterial sculptures from a temple at Locri, now at Naples, the so-called Ino-Leucothea relief of the Villa Albani, a stele from the Esquiline in the Conservatori collection, and lastly the Ludovisi and Boston triple reliefs, as products of Locri Epizephyrii and as representing the Locrian form of late Ionic art, contemporary with the early period of Phidias. These works are considered in relation to the important chthonic cults of Locri and their astronomical features. The miniature figures in the scales on the Boston relief represent a rising and a setting star, possibly the Dioscuri. A possible site for the two "thrones" is found in an ancient sacred pit at Locri, but this and other aspects of the question need thorough excavations and further study of their results, as a basis for definite conclusions. (*J.H.S.* XLII, 1922, pp. 248–253, pl.; 2 figs.)

The Ludovisi and Boston Reliefs.—To the now voluminous literature on the Ludovisi relief in Rome and its counterpart in Boston the late J. N. SVORONOS contributed an extended study which is published in *J. Int. Arch. Num.* XX, 1920–21, pp. 108–159 (2 pls.; 22 figs.). Accepting Mr. Casson's interpretation of the central scene on the relief in Rome as representing the annual renewal of the

virginity of Hera (*J.H.S.* XL, 1920, pp. 137-142; cf. *A.J.A.* XXV, 1921, p. 407). Mr. Svoronos revives Petersen's theory that the two reliefs were originally parts of a ritual bed, and asserts that this was no other than the "bed of Hera" seen by Pausanias in the Heraeum at Argos (II, 17, 3). This was intended for the ritual of incubation, the purpose of which was to secure vigor of body and auspicious marriage for those who slept in it. The central part of the Boston relief shows Hypnos weighing the Keres or significant Dreams of such incubation, in the presence of Persephone Achymene and Hera. On the back of the bed the draped women of the Ludovisi and Boston reliefs were parts of a scene which represented Penelope, Eurynome Actoris, and the bed of Odysseus. The youth with the lyre and the girl with the flutes, flanking the open front of the bed, are Orpheus and Eurydice. Mr. Svoronos attributes this work to Polyclitus of Argos; and finds a place in the composition also for the originals of the Praying Boys of Berlin and Venice.

Two Athenas in Bronze.—In *Gaz. B.-A.* VI, 1922, pp. 15-38 (2 pls.; 13 figs.), T. REINACH investigates the extant copies of two Greek Athenas, the Athena Promachos of Phidias and Cephisodotus' Athena made for the sanctuary at Piraeus consecrated to Zeus Soter and Athena Soteira. Of the Athena Promachos, the two most satisfactory copies are two bronze statuettes, one in the Museum of Fine Arts, Boston, the other in the collection of M.E. d'Eichthal, Paris. The latter is the better because it has the proper inclination of the head. The conclusions reached in the study of Cephisodotus' Athena are more striking, for none of the identifications of this that have hitherto been made have been satisfactory. For the best copy of the head of this Athena, the present author suggests a beautiful bronze head in his own collection, from an old Parisian collection. The best copy of the entire figure is seen in a marble statue in the Uffizi.

Some Greek Bronzes at Athens.—In *Burl. Mag.* XLI, 1922, pp. 137-143 (pl.), S. CASSON writes on a group of small bronzes in the National Museum at Athens that has hitherto received little attention. Five of the figures the author believes to be examples of Attic work in Thessaly and of local copies of that work. The sixth is a brilliant example of the Ionic school of bronze work which had a great influence upon the Attic artists.

Another Head from the Parthenon Frieze.—In *Gaz. B.-A.* VII, 1922, pp. 129-132 (fig.), E. MICHON publishes a fragmentary head of a youth recently presented to the Louvre by M. Picard. Though there remains only the upper, front part of the head, it is sufficient to exhibit the Phidian characteristics and to claim for itself a place in the frieze of the Parthenon.

The Reliefs of the Nike Balustrade.—In *Jh. Oest Arch.* I. XXI-XXII, 1922, pp. 1-82 (pl.; 56 figs.), R. HEBERDEY publishes an elaborate monograph on the arrangement of the reliefs of the Nike balustrade. When complete it consisted of twenty-four slabs which he locates thus: Beginning at the northeast corner of the bastion, facing east and parallel to the steps of the Propylaea were two slabs representing a sacrifice before a cult statue. Next, on the north side, came eight slabs representing, from east to west, Athena and a Persian trophy, cattle for sacrifice, a naval trophy, a hoplite trophy, and burnt offerings. Continuing along the west side were nine slabs, running from north to south, and representing, in order, burnt offerings, cattle for sacrifice, Athena and a hoplite trophy, a Persian trophy and a naval trophy. On the south side, running from west to east, were eight slabs representing burnt offerings, a Persian trophy, a hoplite trophy, cattle for

sacrifice, a naval trophy and Athena crowned. The blocks at the northeast, northwest and southwest corners of the bastion had reliefs on two sides and are here counted twice.

Euclides.—In *Jh. Oest. Arch. I. XXI-XXII*, 1922, pp. 120-122, A. HEKLER calls attention to the importance of the colossal head of Zeus found at Aegira for dating the sculptor Euclides. The style clearly shows it to have been carved about 200 B.C.

Notes on Some Sculptures in the Conservatori Palace at Rome.—Some views on the relationships and Greek origins of certain marble sculptures in the Conservatori Palace, the result of work done in preparing a new catalogue of the collection, are presented by B. ASHMOLE in *J.H.S. XLII*, 1922, pp. 238-247 (3 pls.; 10 figs.). The standing athlete, though a dry and uninteresting copy, is clearly akin to the standing discobolus now in the Antiquarium, which is attributed to Naucydes of Argos, a successor of Polyclitus. The upper part of a draped female figure is from a Praxitelean original nearly contemporary with the Apollo Sauroctonus and the Eirene of Cephisodotus. The herm that has been likened by Gräf to the Tegean Heracles of Scopas (*Röm. Mitt. IV*, 1889, pp. 189 ff.) is a Dionysus, as the vine wreath shows, and more closely related to Attic work, especially the Hermes of Praxiteles, and the Petworth Aphrodite. Lastly a sleeping Eros is likened to the sleeping Hermaphrodite of the Terme Museum, in feature, hair, and rendering of flesh and drapery, whether the originals were of bronze or of marble.

VASES AND PAINTING

Greek Vases with Relief Ornament.—A recently published book by FERNAND COURBY is the first work to embody a systematic and detailed study of Greek vases with relief ornament, from the earliest prehistoric age to the end of the Hellenistic period. In its first part, dealing with the prehistoric origins of this type of pottery, M. Courby discusses the general characteristics of vases with relief ornament in the pre-Hellenic period, and describes vases of this type from the several Aegean sites, dating from the neolithic period to the Bronze Age. In the second part, devoted to the archaic Greek period, connections with the earlier age as well as the general characteristics of the period are pointed out. The local archaic types of relief pottery are then described: those of Crete, Caria, Boeotia, Tenos and Delos, Melos, Thera, Argos, Corinth, Athens, and Laconia; and their mutual influences are discussed. A chapter is given to relief pottery in Etruria and Magna Graecia in the same period. The question of the relation of vases of this date to metal vases is discussed. Vases with polychrome relief, dating from the fifth and fourth centuries B.C., are the subject of Part III. Here Attic vases naturally receive the most attention. The subject of Part IV is the relief pottery of the fourth century, particularly the early examples of imitation of metal. Hellenistic terra-cotta bowls are discussed in Part V; Hellenistic relief vases of Asia Minor, especially those of Pergamon, are described in Part VI; and some miscellaneous types of relief vases, belonging to the latest Greek period, in Part VII, including glazed, gilded or silvered, and polychrome ware. In a final chapter the author summarizes the principal conclusions of his studies. Emphasis is placed on the conditions which account for the marked separation of relief pottery from painted pottery, in motive and style, in the prehistoric and archaic periods. In the classical period relief ornament is almost excluded. It resumed

importance at the time of the decay of painted pottery, about the middle of the fourth century B.C., when vases imitative of metal repoussé began to be produced. Crete had the dominant rôle in the production of relief vases in the Bronze Age; Rhodes and Caria in the archaic period; Athens and Boeotia in the classical period; Alexandria and Pergamon in the Hellenistic age. The interest of this pottery remains chiefly archaeological and historical rather than aesthetic. Each of M. Courby's chapters is accompanied by a bibliography of the subject; and his discussion of the several types of relief vases is frequently accompanied by a comprehensive descriptive list of the class of vases in question. The book is illustrated with numerous line drawings and with plates, and is provided with a general index, an index of Greek words, and an index of classical authors quoted. [*Les vases grecques à reliefs*. Par FERNAND COURBY. (Bibliothèque des Écoles Françaises d'Athènes et de Rome, 125.) Paris, 1922, De Boccard. x, 598 pp.; 17 pls.; 117 figs. 8vo.]

Greek Vases at the Villa Giulia.—One thinks of the Villa Giulia in Rome as a museum of Etruscan art; but it also houses a collection of important Greek vases. In *Dedalo*, III, 1922, pp. 69-91 (15 figs.), G. Q. GIGLIOLI publishes the most beautiful of these, including examples from the seventh to the fourth century B.C.

A Mate to the Amasis Cylix in Boston.—Among some black-figure fragments in the Dorset County Museum at Dorchester, England, is a piece of an eye-cylix which shows parts of both eyes, the single figure between the eyes, and parts of the maker's signature, including of his name only the final Σ. Of the many variations in the design of the eye on eye-vases, the fragmentary cylix in the Boston Museum of Fine Arts signed by Amasis is the only black-figure cylix which uses exactly the same arrangement of colors as the Dorchester fragment. Although the figure between the eyes is missing in the Boston cup, a comparison with other, larger vases by the same maker shows some striking analogies, with distinct though slight differences. It seems probable that these two cylixes, which are apparently contemporary with early red-figure ware, are late products of the shop of Amasis, when his painters were not doing quite such careful work as we see in the amphorae and olpae. (A. D. URE, *J.H.S.* XLII, 1922, pp. 192-197; fig.).

The Apobates.—In *Rendiconto della R. Accademia delle Scienze dell' Istituto di Bologna, Classe di scienze morali*, second series, VI, 1921-22, pp. 71-79 (pl.; fig.), PERICLE DUCATI presents a new interpretation of a chariot scene on an amphora by Execias in the Louvre (*Wiener Vorlegebl.* 1888, 1a). The bird with human head which hovers over the horses is the *aithya* (see C. Anti, in *Mon. Ant.* XXVI, 1920, pp. 269-318), the symbol of the protecting power of Athena. Of the two figures in the chariot the one in long robes is the charioteer (not Athena), while the other, a warrior in full armor, is the apobates. The display at public festivals of the skill of armed men in leaping off and on chariots is a reminiscence of Homeric warfare, in which the hero rode to battle in a chariot, but descended to the ground to fight. The representation of such a figure on an amphora by Execias shows that the appearance of apobatae in the public games at Athens was much earlier than has been supposed.

The Busiris Vase as a Caricature.—The Greek artist who painted the so-called Busiris vase in Vienna must have been in Egypt himself, for he not only reproduces with fidelity the Egyptian dress and facial type, but directly imitates an Egyptian motive. As the Egyptian warlike kings were represented in their

commemorative relief-pictures mounting the war-chariot and holding in either arm a pair of diminutive conquered foes, so, turning the tables, the Greek humorist shows Egyptian prisoners grasped by a mighty Hellenic hero. His defiance of the rule of isoccephaly gave the Greek observer the clue to the caricature. (F. MATZ, *Arch. Anz.* 1921, cols. 11-14; 2 figs.)

INSCRIPTIONS

An Epigraphic Bulletin.—In *R. Ét. Gr.* XXXV, 1922, pp. 426-439, P. ROUSSEL publishes a bibliographical bulletin on the literature of Greek epigraphy of the year 1921, including summaries of the principal publications in this field.

Delian Inscriptions.—In *R. Ét. Gr.* XXXV, 1922, pp. 415-425, MAURICE LACHOIX publishes a series of textual and interpretative notes on twenty-eight of the inscriptions from Delos, *I.G.* XI, II and IV, Nos. 109, 111, 118, 122, 133, 162, 164, 177, 179, 199, 201, 203, 208, 219, 269, 274, 287, 288, 289, 726, 768, 808, 829, 853, 1142, 1171, 1181, 1185.

Greek Inscriptions from Macedonia.—In *J.H.S.* XLII, 1922, pp. 167-183, M. N. TOD publishes a dedicatory inscription to T. Aelius Geminus Macedo copied at Saloniki by Captain Salt in 1918, and two epitaphs from Galatista; and discusses the HPQI HPOTTYOQI inscription recently published by P. Foucart. The Macedo inscription, a dedication by his daughter Geminia Olympias, recounts that he had been gymnasiarch and first archon of his own city of Thessalonica, had given 10,000 cubits of wood for building the basilica, had been curator ($\lambda\omicron\gamma\iota\sigma\tau\eta\varsigma$) of Apollonia on the Adriatic, and had held the important posts of president of the Attic Panhellenion, priest of divine Hadrian and agonothetes of the Panhellenic games. The Panhellenion or Panhellenic Union under the leadership of Athens, and the annual Panhellenic games were established by Hadrian, probably in the year 131-132, when he dedicated the Olympieum at Athens; and as Macedo held his office for the "greater games," and in the eighteenth "Panhelleniad," the festival seems to have had a special celebration at regular four-year intervals, like the other national festivals. The date for Macedo would then be 199-200. Of the two epitaphs, the shorter, giving only the name of Polemon, son of Hipponicus, is probably of the second century B.C., and the other, on a cippus erected to Aurelius Ancicetus by his parents, is of the third century A.D.

The Building Inscription of Tegea.—TURÉ KALEN is the author of a new study of *I.G.* V, 2, 6 (Solmsen, *Inscriptiones selectae*,³ 3), the important building inscription from Tegea. He proposes new interpretations of some difficult passages, and supplies new readings to fill lacunae in the text. (*Strena Philologica Upsalensis*, 1922, pp. 187-201.)

A Greek Inscription from Bithynia.—In *Jh. Oest. Arch. I.* XXI-XXII, 1922, Beiblatt, cols. 261-270, J. KEIL discusses and offers a better text of a Greek honorary inscription from Bithynia; cf. *I. Gr. Rom.* III, 2.

A Greek Inscription at Tarentum.—In *Jh. Oest. Arch. I.* XXI-XXII, 1922, Beiblatt, cols. 269 f., R. MÜNSTERBERG calls attention to a Greek dedicatory inscription seen at Tarentum by Count Friedrich Leopold zu Stolberg (cf. his *Reisen* (1794), III, p. 177). But five other Greek inscriptions are recorded from Tarentum.

A Greek Inscription from Alexandria.—In *Jh. Oest. Arch. I.* XXI-XXII, 1922, Beiblatt, cols. 271-276, A. STERN publishes two fragments of a Greek inscription

from Alexandria referring to the *idiologos* Marcius Moesiacus. It dates from the fifth year of Hadrian.

An Altar of the Phrygian Cult in the Lateran Museum.—In *Mél. Arch. Hist.* XL, 1923, pp. 3–18, PIERRE FABRE discusses the inscribed altar discovered in 1919 at the Palazzo dei Convertendi, Rome (*Not. Scav.* 1922, pp. 81–87; *Atti della Pontifica Accademia Romana di Archeologia*, Ser. II, Vol. XV, pp. 271–278). The altar is adorned with symbols relating to the taurobolia of the cult of Cybele and Attis and bears an inscription for which the reading proposed is:

"Εργα νόον πρῆξιν βίον ἔзоχον ἐσθλά πρόπαντα
Γα[μα]λίου πραπίδω[ν] τοῦτο φέρω τὸ θυμα
"Ὅς Δ[ιοῦς] παλῶσορον ἐπ' Εὐρυβίην πάλι ταύρων
Ἦγαγε καὶ κρεῖνον σύμβολον εὐτυχίης.
"Οκτὼ γάρ λυκάβαντας ἐπ' εἰκόσιν ἡμερόντας
Νύκτα διασκεδάσας αἰθῆς ἔθηκε φάος

μησί| |ρίοτος ἡμῶν

"I bring as my offering the works, the thoughts, the action, the noble life, and the virtues of the soul of Gamalias, who has twice brought to the all-powerful resuscitated one of Deo the bull and the ram, pledge of happiness. For he has dispersed the night and, for twenty-eight years of peace, brought back the light of salvation." The inscription shows the mystical, symbolic sublimation of the Phrygian religion in the third or fourth century after Christ, when it was in competition with Mithraism and Christianity. The altar was, as were various other stones found at various times, no doubt set up in the *Phrygianum*, which appears to have occupied a large area in front (east) of the Piazza di San Pietro.

COINS

The McClean Collection of Greek Coins.—Among recent numismatic publications unusual importance attaches to a recent volume of the Cambridge University Press, the first of a detailed catalogue of the magnificent collection of Greek coins presented to the Fitzwilliam Museum of the University by the late John Robinson McClean. This volume is devoted to the coins of Spain, Gaul, Sicily, and Italy. Mr. McClean was especially interested in the collection of extensive series of coins, illustrating as fully as possible the history of certain cities or regions. "Rare and beautiful as are many of the pieces described, the outstanding merit of this part of the collection will be found not so much in them as in the completeness with which the successive stages of art and history are illustrated. There are 386 coins of Syracuse, 272 of Tarentum, 204 of Thurii . . . and over 100 coins each from such mints as Agrigentum, Croton, Metapontum, Neapolis, and Rhegium; while such places as Heraclea, Caulonia [etc.] where the output was not so large, are admirably represented." The interesting historical inferences made possible by the comprehensiveness of these local series is commented upon by Mr. S. W. Giese, the author of the catalogue. In the catalogue itself parallel columns show (1) the serial number of the coin, and that of the plate on which, if illustrated, it is shown; (2) the metal, and the axis of the stamp; (3) weight in grammes and grains; (4) size; (5) description of the obverse; (6) description of the reverse. There is a geographical index, an index of royal personages and tyrants whose names or portraits appear, and indexes of types, symbols, letters and inscriptions, countermarked or restruck coins. About two

thirds of the coins are illustrated in collotype plates. In the discussion of important coins the author often lists other specimens from the same die. Frequent reference is made to catalogues of sales from which the McClean coins were obtained. [*Fitzwilliam Museum: Catalogue of the McClean Collection of Greek Coins*. By S. W. GROSE. Vol. I: Western Europe, Magna Graecia, Sicily. Cambridge, 1923, University Press. xii, 380 pp.; 111 plates. 4to. 84s.]

The Gold of Croesus.—In the *Bankers' Magazine*, CVI, 1923, pp. 1002-1009 (3 figs.), T. LESLIE SHEAR, in reporting the recent discovery of staters of Croesus at Sardis, discusses the economic development of the kingdom of Lydia, the establishment of a Lydian unit of currency, and the invention of coinage. The significant innovation of Croesus' coinage is the substitution of gold for electrum. One of the Sardis staters was submitted to a mineralogical test by Dr. George F. Kunz, who reported that it had a weight of twenty-three karats, or .958 fine. A similar coin obtained from a sale at Brussels was analyzed by an expert who reported his results as follows: "After removing foreign iron by magnetic treatment, gold, 98.13 per cent; silver, about 1.60 per cent; iron, .15 per cent; platinum, about .02 per cent." The stater of Croesus, then, is of almost pure gold.

The Forgeries of Christodoulos.—In *J. Int. Arch. Num.* XX, 1920-21, pp. 97-107 (9 pls.; 3 figs.), the late J. N. SVORONOS has given a brief account of the activities of C. Christodoulos and his assistants in the production of imitations of ancient coins for the dealers in antiquities, and publishes in a series of plates illustrations of 284 of these skilful forgeries.

GENERAL AND MISCELLANEOUS

A Bulletin of Greek Archaeology.—The latest archaeological bulletin of *R. Ét. Gr.* (XXXV, 1922, pp. 335-390; 15 figs.) is edited by CHARLES DUGAS, who has succeeded the late André de Ridder in the direction of this department of the periodical.

The Topography of Argos.—An extended study of the topography of the city of Argos, reviewing the testimony of Pausanias and other ancient authorities, and confirming, supplementing, or opposing the views of Vollgraff and other scholars who have concerned themselves with the archaeology of Argos, is contributed by AXEL BOETHIUS to *Strena Philologica Upsalensis*, 1922, pp. 248-289 (9 figs.; map).

Bronze Work of the Geometric Period.—By four series of examples (horse, centaur, Zeus, warrior) S. CASSON shows that the Attic bronze art of the sixth and fifth centuries was directly descended from the earliest bronze art of the geometric period, modified by Ionic and other outside influences, and that this earliest geometric bronze work, in which the figure was made from a bar or bars of metal by cutting, bending, welding and beating, was entirely independent of the highly developed and delicate art of bronze casting of Crete. Even when it adopted the technique of casting, the clumsy forms of the bar technique were for a time retained. The type of horse in geometric art, tall and long-legged, shows its northern origin. Similarly the distinctive Attic type of face, seen in coinage, painting and other arts, is shown as a local development from the general mainland culture of the earliest geometric period. (*J.H.S.* XLII, 1922, pp. 207-219; 16 figs.)

Oriental Influence on Archaic Greek Art.—Starting with the Egyptian situla of faience found at Corneto and dated by its hieroglyphic inscription containing the name of the son of Pharaoh Bokenramph (Greek, Bokchoris: 734-728 B.C.)

G. KARO compares the objects found in the grave with the situla with those from tombs at Vetulonia, Caere and Praeneste, and argues that within a generation or two of this time is to be assigned the height of Egyptian influence on Etruscan art, and the beginning of proto-Corinthian technique. Then he traces the first steps in the development of the tripod from early post-Mycenaean times, and the relation of its decoration to that of Phoenician bowls showing Egyptian influence. He concludes that the period of oriental influence on Greek art should be dated somewhat earlier than is customary, and that the duration of the Geometric period should be shortened in proportion. (*Ath. Mitt.* XXXXV, 1920, pp. 106-156; pl., 6 figs.)

The Boeotian Helmet.—In *Art Bulletin*, IV, 1922, pp. 99-108 (8 figs.), A. D. FRASER discusses the type of helmet referred to as the Boeotian helmet by Xenophon in his treatise on the art of horsemanship. Previously proposed theories as to this helmet are shown to be incorrect; Xenophon's brief description specifies a helmet which would afford the best possible mean between perfect protection and perfect freedom of view. This requirement is fulfilled by a specimen in the University Museum at Philadelphia, a helmet which corresponds closely to the type known as the helmet of Diomedes.

The Origin of the Head of Medusa.—The idea that the Medusa type evolved from that of the Egyptian Hathor is not original with R. PETTAZZONI, who writes on the subject in *Boll. Arte*, I, 1922, pp. 491-509 (33 figs.). But his detailed study of the monuments showing the derivation is a contribution, as is his theory concerning the manner in which that derivation took place. The author does not believe, with Furtwängler, that the Egyptian Hathor type was supplemented by the Egyptian Bes type in the creation of the Medusa type, but that the Hathor type alone was responsible.

Aphrodite as Mother.—In *Art Bulletin*, IV, 1922, pp. 45-58 (4 pls.), C. G. HARCUM discusses the subject matter and date of a beautiful Parian marble statue acquired some years ago by the Royal Ontario Museum of Archaeology, Toronto. The attitude of the figure, as she holds the child (now largely destroyed) on her arm, comparison with similar groups, and consideration of mythological concepts of Aphrodite lead to the conclusion that we have that goddess here represented in her capacity of *κοιροτρόφος*, nurturer of youth. There is a predominance of Praxitelean tradition in the work, and it seems plausible to attribute it to the Hellenistic period, at about the end of the fourth century.

The Origin of the Eleusinian Mysteries.—In *Arch. Rel.* XXI, 1922, pp. 285-309, A. W. PERSSON, gathers evidence to show that the Eleusinian mysteries were derived from Crete. The oldest Telesterion is pre-Hellenic. The name Eleusis is probably of Cretan origin. The vessels used in the cult are the same as those used in the Minoan ritual. The form of the Telesterion is, perhaps, a development of the so-called Minoan theatre. The Anaktoron is identical with the Cretan repositories and so-called house-chapels. The purifications of the Eleusinian ritual originally belonged to the Minoan religion. The essence of the mysteries is a worship of fertility, such as constituted the essence of the Minoan religion. A double tradition found in Diodorus, and in the Hymn to Demeter, traces the mysteries back to Crete.

The Theseus Legend.—ERNST KJELLBERG is the author of a recent paper on the evolution of the Attic cycle of Theseus legends. The foreign origin of Theseus made him the suitable symbol of the new all-Attic state of Solon and Pisistratus.

But at the same time a connection with the legitimate succession of Athenian kings had to be provided. So Pandion and Aegeus were introduced into the traditional series of early Attic kings—a case of political mythology. (*Strena Philologica Upsalensis*, 1922, pp. 240-247.)

The Death of Hercules in Fire on Mt. Oeta.—In *Arch. Rel.* XXI, 1921, pp. 310-316, M. P. NILSSON, discusses the traditional "Pyre of Hercules" discovered by Pappadakis in 1920 on Mt. Oeta. Here there was found an enclosure about twenty metres square with a deposit of ashes from forty to eighty centimetres deep. In the light of this discovery, the self-immolation of Hercules is to be regarded as an aetiological myth that arose out of the prehistoric custom of burning men, and later images of men, in this place. The custom and the myth are both to be regarded as of primitive Greek origin.

Thetis in Eretrian Art.—In *J. Int. Arch. Num.* XX, 1920-21, pp. 89-96 (pl.; fig.), STANLEY CASSON calls attention to a pair of gold earrings of unusual workmanship, discovered in Eretria in 1897 and now in Athens (Πρακτικά, 1907, p. 118). The principal element in the design of each is the representation of Peleus and Thetis, and of a lioness and snakes which symbolize the various transformations of the goddess. Comparison with a pair of earrings of similar style from Eretria, now in the British Museum, shows that the pair in Athens is to be dated about 450 B.C. There is some evidence of a cult of Thetis in southern Euboea. Mr. Casson conjectures that the maker of the earrings in Athens was influenced in his representation of the subject by the beautiful marble group of Theseus and Antiope from the Daphnephoros temple at Eretria; and that the sculptor of this group, on the other hand, conformed in some measure to the traditional type of the Peleus-Thetis group at Eretria.

The Interpretation of Greek Music.—In *J.H.S.* XLII, 1922, pp. 135-166, E. CLEMENTS discusses ancient Greek music in the light of the defects of modern European music and of the survivals in India of traces of the ancient system. This had a very great variety of intervals, which he explains mathematically. European music has lost inexpressibly in beauty and richness by adopting a very narrow and rigid system of intervals, which only the most gifted musicians occasionally disregard. Mr. Clements gives tables of intervals, modes and scales, discusses rhythm (which appears from the extant chorus from "Orestes" to have followed a stress accent much earlier than this is generally acknowledged to have existed) and prints seven pieces of Greek music that have come down to us, with illustrative accompaniments to four of them. He also treats the question of the relation of poetic ictus and spoken accent in Greek.

ITALY

ARCHITECTURE

Fictile Revetments in Magna Graecia and Sicily.—Mrs. E. DOUGLAS VAN BUREN has extended her study of terra-cotta architectural ornament to the Greek temples of Southern Italy and Sicily, and has embodied the results of her research in a volume uniform in format with her *Figurative Terra-cotta Revetments in Etruria and Latium* (see *A.J.A.* XXVII, 1923, p. 212). In a brief introduction Mrs. Van Buren points out the historical importance of the Greek terra-cotta revetments, and suggests some of the criteria by which they may be dated. She describes some common variations of form and arrangement in the geisa, simae,

roof-tiles, and other architectural terra-cottas. It is uncertain whether the use of such revetments came to Italy and Sicily from Greece or from Asia Minor. Examples from Asia Minor seem to be more closely related to the Etruscan revetments than to the Western Greek. The introduction is followed by descriptions of twenty-four South Italian and Sicilian sites, arranged in alphabetical order. In the discussion of each site the historical facts or traditions of the place are followed by a description of the architectural terra-cottas found there. The last part of the book is a descriptive catalogue of individual pieces, under the following headings: lateral simae, cresting, raking cornice, geisa, simae, water-spouts, lions' heads spouts, palmettes of the ridgepole, roof-tiles, kalypteres of the ridgepole, antefixes, akroterion bases, central akroterion, lateral akroterion, pediment, metopes, frieze, relief. The book is indexed and contains plates which illustrate eighty of the objects discussed. [*Archaic Pictile Revetments in Sicily and Magna Graecia*. By E. DOUGLAS VAN BUREN. London, 1923, Murray. 168 pp.; 14 pls. 4to. 21s.]

SCULPTURE

Portraits on Late Roman Sarcophagi.—In *Z. Bild. K.* LVII, 1922, pp. 119-123 (11 figs.), G. RODENWALDT studies the portraits on Roman sarcophagi from the second to the fourth century. One sees in the various periods different degrees of idealism and realism in the portraits. In general, it is true that the Roman portraits are much more realistic than the Greek and that they occur much more frequently. The Roman, in his mania for preserving his likeness to posterity, does not hesitate to use his portrait even in mythological scenes; the heroes and heroines in these not infrequently assume the features of the persons for whom the sarcophagi were made.

The Funerary Hercules.—In *Mél. Arch. Hist.* XXXIX, 1921-1922, pp. 219-266 (pl.), and XL, 1923, pp. 19-102, J. BAYET writes of Hercules as connected with the dead. On the lid of a sarcophagus in the Farnese Palace in Rome (pl.) are the recumbent figures of a man and a woman. The latter holds in her hand a necklace or a garland; at her feet is a child (lacking the head) who holds a bunch of grapes and a bird. Behind the man's shoulders are a lion's head, a quiver full of arrows, and a club. M. Bayet gives a list of Roman sarcophagi with representations of Hercules and a classified list of Roman figured sarcophagi. He then discusses the symbolism of the "twelve labors" in the first two centuries of our era, showing that Hercules was a popular hero, a symbol of human good and ill fortunes, and a victor in conflict with death and hell. The symbolism of the cult of Dionysus and the connection of Hercules therewith are next discussed. That the deceased is represented under the form of Hercules, Bacchus, or even some other deity is due in part to survival of the belief in magic and in part to the wish to gain for him the favor and protection of the deity in his journey to the lower world. The grouping of Hercules with Centaurs and with Satyrs is shown to belong to Dionysiac symbolism, whether Hercules is in friendly or hostile relation to them. Both Centaurs and Satyrs are connected with inhabitants of the infernal regions, and their funerary significance is clear. In the art of the Roman Empire the Centaurs hostile to Hercules retain nothing of their Dionysiac character, that being reserved for the friendly Centaurs, the benevolent companions of the soul in its journey to the lower world. The recorded journeys of Hercules to the lower world and his combats with infernal monsters are traced from Hesiod to Virgil and later, and attention is called to the close relation existing

between marine monsters and deities and those of the infernal regions. The hostile and friendly relations of Hercules with the Gods of Death and his alliance with Geryon are discussed, and the confusion of Hercules with the infernal gods and heroes is described. Further evidence of the relation of Hercules to the lower world is seen in his connection with certain plants and more especially in his quality as God of Waters, for waters are of chthonic origin. Wealth and fecundity are also originally chthonic, and with these Hercules is closely associated. That the figure of Hercules often has an apotropaic significance is made clear, and also that he is supposed to possess magic power to secure immortality. His funerary character appears as early as Hesiod and is developed through the ages in Greece and in Italy. The Farnese sarcophagus presents a synthesis of a crowd of ideas, as a result of which Hercules emerges as the double of the deceased, as his protector after death, and as the guarantor of his blessed immortality.

A Late Imperial Portrait.—Among recent acquisitions of the Berlin Museums is a late Roman portrait head of interesting quality (Fig. 3). R. DELBRUECK has subjected it to a careful analysis and concludes that it is to be dated about 400 A.D., that it resembles typical coin portraits of the period, and that it has a close likeness to Honorius but does not represent that emperor himself. It is more probably a portrait of Arcadius than of either of the other emperors of the same house, Theodosius II and Valentinian III. (*Ber. Kunsts.* XLIV, 1923, pp. 53-59; 6 figs.)



FIGURE 3.—HEAD OF ARCADIUS (?):
BERLIN.

The Farnese Trophies.—In *Mél. Arch. Hist.* XXXIX, 1921-1922, pp. 303-318 (pl. 2; 2 figs.), MARCEL DURRY publishes and discusses more or less fragmentary reliefs representing trophies. These are now in the Farnese palace, in niches under the second porch. They decorated the ends of projections which extended outwards from an entablature and were supported by columns. They came from the *Domus Flavia* on the Palatine. The figures of Victories engaged in arranging the trophies are fragmentary, but were evidently well composed for decorative effect. The arms and articles of equipment displayed are in part Roman, but chiefly such as were worn by northern barbarians. The victories to which these trophies refer are those of Domitian over the Chatti and the Dacians.

COINS

Ancient Counterfeit Roman As.—P. L. FIORANI GALLOTTA pictures and describes three counterfeit Roman asses, still connected by the arms of fused metal as in the forged mould in which they were cast. The coins are apparently of the uncial series, and the specimen came from excavations at San Colombano al

Lambro in the territory of Lodi, Italy. (*R. Ital. Num.* XXXV, 1922, pp. 197-201; pl.)

Posthumous Issues of Galba.—The coinage of Galba is extremely rich for so short a reign. H. MATTINGLY (*Num. Chron.* 1922, pp. 186-199; pl.) would attribute certain of these issues, which he includes in two classes, not to Galba himself, but as commemorative issues to Vespasian, in 70-71 A.D., who accordingly must have reestablished the mint at Lugdunum, which Galba had closed. When these conclusions were presented to the Royal Numismatic Society, Mr. SYDENHAM expressed a doubt whether for such a commemoration Vespasian would have turned to the mint of a city which had been so strongly opposed to Galba. But the theory proffers a solution of many difficulties.

GENERAL AND MISCELLANEOUS

The Cults of Campania.—The first volume of the new series of Papers and Monographs of the American Academy in Rome is a book on the cults of Campania, by ROY M. PETERSON. In the first chapter the author presents a résumé of the salient facts in the religious history of Campania from the prehistoric to the Christian period. After a brief discussion of the rather scanty evidence on early Oscan cults in this region, he touches upon the relatively slight influence of Etruria in Campania, and then reviews the most important evidence of the introduction of Greek cults through the colonization of the coast, especially at Cumae, and through contact with the cities of Magna Graecia and Sicily. The spread of these cults to the interior districts is also traced, especially of the Dionysiac, Orphic, and Pythagorean mysteries. To Campanian influence is attributed the origin of cults of Heracles, Demeter, Apollo, Mercury, the Dioscuri, and Victoria at Rome. In the later republican period new oriental religions reached Campania by sea. The foundation of Roman colonies brought in its train a formal Roman organization of priests, augurs, etc. In the time of the Empire the cult of the Emperor was practised with more fervor in Campania than in Rome itself. The remains of Pompeii show how great a part religious festivals and ceremonies played in the life of the region at this time. By the end of the second century new types of belief, especially those of oriental origin, had made great progress. At the beginning of the fourth century Campania was one of the chief centres of Christianity in Italy. But even at this period, the list of festivals authorized by Valentinian II in Campania shows an attempt to provide for celebrations in which both Christians and pagans could join. Chapters II-VII of the monograph constitute a detailed study of the local cults of Campania, arranged under the names of its principal towns and districts: Cumae, Baiae, Misenum; Puteoli; Neapolis; Pompeii and Herculaneum; Nuceria, Stabiae, Surrentum, Capreae; Capua; Nola and the minor Campanian towns. [*The Cults of Campania.* By ROY MERLE PETERSON. (Papers and Monographs of the American Academy in Rome, I.) Rome, 1919, American Academy. vii, 403 pp; map. Svo. 50 lire.]

Elpenor at Antium.—In *Mél. Arch. Hist.* XL, 1923, pp. 115-122, L. BAYARD corrects *Ἀρπύριον* in Dion. Hal., *Ant. Rom.* I, 72, to *Ἀντίον*. In the Periplus attributed to Scylax the *σῆμα* of Elpenor (Homer, *Od.* X, 552-560; XI, 51-78; XII, 1-15) is mentioned as being between Circei and the mouth of the Tiber. The only suitable spot is Antium. Moreover, the name Elpenor, if interpreted as Semitic (el-peney-or), is the equivalent of Greek *ἄρπυριον*, *ἀρτυρή*, Latin Antium.

The Date of the Official Introduction at Rome of the Cult of Attis.—In *Mél. Arch. Hist.* XL, 1923, pp. 135-159, JÉRÔME CARCOPINO shows that the passage in the *De Mensibus* of Lydus (iv, 59, p. 113, Wuensch) which ascribes the introduction of the cult of Attis at Rome to Claudius refers to the first Emperor Claudius, not, as Domaszewski thought, to Claudius II. The views of Wissowa and others are discussed. Claudius I introduced the rites of Attis, but the *taurobolium* was to be performed *pro salute imperatoris*, must be prescribed by the archigallus, and must take place in *Portu*. These restrictions are mentioned in the palimpsest known as *Fragments du Vatican*, found in 1821 by Cardinal Angelo Mai.

The Cista of Grammichele.—In *Rendiconto della R. Accademia delle Scienze dell' Istituto di Bologna*, Classe di Scienze Morali, VI, 1921-22, pp. 61-74, P. DUCATI renews the discussion of a bronze cista found at Grammichele in Sicily, and published by Orsi (*B. Pal. It.* fifth series, II, a. XLII, 1917, pp. 36-49). In opposition to the view of Orsi, who maintained that this object is of Hellenic manufacture, and that even this class of cistae generally is Greek, Mr. Ducati argues that it is of North Italian origin. The type, originally derived from the Mycenaean ivory pyxis, perhaps through Cyprus, and transformed into terracotta and bronze in Etruria, was an object of manufacture in the valley of the Po, and it is probably from this region that the example found in Sicily was exported.

A Novel of Roman Life.—*Octavia*, by SEYMOUR VAN SANTVOORD, is a novel of the reign of Nero, embodying a considerable amount of archaeological detail, and provided with a glossary of archaeological terms. The frontispiece, which has the legend "Ideal Head of Octavia," really represents the bust of the Cnidian Aphrodite of the Vatican. [*Octavia, a Tale of Ancient Rome.* By SEYMOUR VAN SANTVOORD. New York, 1923, Dutton. 457 pp.; 3 pls. 8vo. \$2.50.]

EARLY CHRISTIAN, BYZANTINE AND MEDIAEVAL ART

GENERAL AND MISCELLANEOUS

The Seal of Solomon.—To the series of publications recently inaugurated by the Faculty of Letters of the University of Strasbourg, PAUL PERDRIZET has contributed a study of the two types of talismans known as the Seal of Solomon. A common form shows Solomon on horseback, transfixing a female devil with his lance. This type originated in Egypt, where in the Greek period horses were associated with aristocracy and royal power, and hence with gods. The mysterious "Heron" who is shown as an equestrian figure on a Graeco-Egyptian relief is probably Horus. At a later time Christian saints were naturally represented on horseback. A curious fresco discovered in the ruins of a Coptic monastery at Baouit shows Saint Sisinnios on a horse, slaying the female demon Alabasdra. A mediaeval Greek text gives the story of Sisinnios and the demon, who is here called Gyllo, but claims "twelve and a half" names. There are variant lists of these names, on which M. Perdrizet comments. Gyllo is apparently identical with Gello, mentioned in a fragment of Sappho, and described by a scholiast as a demon who drinks the blood of children. The name is of Babylonian origin, and survives in the word ghoul. [*Negotium perambulans in tenebris. Études de démonologie gréco-orientale.* Par PAUL PERDRIZET. (Publications de la Faculté des Lettres de l'Université de Strasbourg, Fasc. 6.) Strasbourg, 1922, Istra. 38 pp.; 12 figs. 8vo. 3 fr.]

Christus Crucifer.—In *Art Bulletin*, IV, 1922, pp. 117–126 (8 figs.), C. R. MOREY publishes a study, based on the Princeton index of iconography, of *Christus crucifer*. The index shows that this type of Christ is Eastern and but gradually makes itself at home in the West. The subtype in which the short-haired, beardless Christ stands on one or more of the four beasts of scripture is African (Coptic), as is also the subtype represented on the ivories of the Maximianus chair group, in which a similar Christ carries a cross frequently not unlike a wand.

The Cistercian Abbey of Belmont.—In *Syria*, IV, 1923, pp. 1–22 (9 pls.; 13 figs.), C. ENLART describes in detail the twelfth-century Cistercian abbey at Belmont in Syria. He concludes that “although very inferior to the great abbeys of the Cistercians in Europe, and to the monastery of the Prémontrés at Lipas in Cyprus, Belmont is a valuable witness to the character of colonial Cistercian art, and to the widespread influence of Burgundian and Provençal models.”

German Goldsmiths in Rome.—German craftsmen of all kinds were numerous at the seat of the papacy in the Middle Ages. The rich appointments required for the many churches and clerical personages made goldsmithery especially profitable. And its importance did not wane with the Middle Ages. In *Mh. f. Kunstw.* XV, 1922, pp. 283–298, F. NOACK publishes documents relating to German goldsmiths in Rome from the middle of the fifteenth century to near the end of the eighteenth.

The Winged St. John the Baptist.—In *Art Bulletin*, V, 1922, pp. 35–40 (3 pls.), W. HARING writes on the somewhat unusual iconographical feature of the representation of St. John the Baptist as winged, using as his point of departure two examples in American collections: a Russian icon in the Princeton University Museum and a Greek icon owned by Professor Emerson Swift of the University of Chicago. They are of recent date and of slight artistic value, but they are interesting as survivals of the forms developed by mediaeval Byzantine painting.

A Fourteenth Century War-Hammer.—A unique war-hammer in the Museo Civico Correr at Venice is published by C. A. DE COSSON in *Burl. Mag.* XLII, 1923, pp. 188–191 (pl.). The principal part of the weapon consists of a dragon cast in latten. It is decorated with the arms of Francesco II, the last Lord of Padua, who probably secured it when he travelled in the North, for it is clearly of northern workmanship.

ITALY

San Martino at Lucca.—In *L'Arte*, XXV, 1922, pp. 207–219 (17 figs.), A VENTURI discusses the remodelling done on the church of San Martino in the second half of the fourteenth century and the first half of the fifteenth. The influence of the Pisan Camposanto is the thing that strikes one first. But closer study makes it possible to distinguish the work of individual artists. For example, the heads between the springings of the arches may be divided into clearly marked groups, the most important of which may be assigned to an archaistic contemporary of Jacopo della Quercia. The characteristics of this unknown master, as they may be determined from this group of heads, clearly account for the peculiarities of the group of St. Martin sharing his cloak (on the cathedral at Lucca), which have led to the ascription of this group to the thirteenth century artist, Guidetto da Como.

Gothic Churches of Gubbio.—In his study of the Gothic churches of Gubbio, M. SALMI, in *L'Arte*, XXV, 1922, pp. 220–231 (25 figs.), shows that while the architecture of this region must have been derived largely from monastic ogival types,

it still shows much originality, a continual tendency toward the breaking away from old forms.

Petrarch as an Aesthetician.—As justification for treating again this much discussed subject, L. VENTURI, in *L'Arte*, XXV, 1922, pp. 238-244, points out that previous notices of the subject have, for the most part, considered as art criticisms Petrarch's statements whose interest is purely historical or iconographical. There are indications in Petrarch's writings that he intended to write a treatise which should deal with figurative art, and there are passages in his works that give us a fairly clear idea of what that treatise would have been. These passages are cited in the present article.

Jacopo Bedi.—In *Art in America*, XI, 1923, pp. 150-158 (5 figs.), M. SALMI calls attention to the work of a distinctive fifteenth century artist of Gubbio, Jacopo Bedi di Benedetto, whose signature appears on some badly preserved frescoes in the chapel of the cemetery of S. Secondo, Gubbio. This artist, like his contemporary compatriots, follows the traditions of Ottaviano Nelli, but he has more individuality than the others. Particularly noteworthy is his decorative use of line.

Dante and Petrarch.—In *Fogg Art Museum Notes*, I, No. 3, January, 1923, pp. 25-33 (2 figs.), EDWARD K. RAND discusses the interpretation of the panel painting of two poets, by Giovanni dal Ponto, recently acquired by the Fogg Museum. The figures on the panel, which is from the end of a cassone, have been interpreted as Dante and Virgil, or Dante and Petrarch. Professor Rand agrees with Mr. Perkins in identifying the second figure as Petrarch, and suggests that the painting has an allegorical significance. Dante and Petrarch represent Sacred and Profane Poetry. The earthly triumph of Petrarch is symbolized by the laurel wreath; the celestial reward of Dante is expressed in the crowning of the poet by an angel who hovers over his head. It is conjectured that the Fogg Museum panel may have belonged to the same cassone as the long panel in the Spiridon collection in Paris, representing the Seven Liberal Arts.

Ceramics of the Quattrocento Italian Pharmacy.—In *Faenza*, X, 1922, pp. 76-88 (13 pls.), A. CASTIGLIONI shows the importance of the apothecary and pharmacy shops for the development of Italian ceramics. Already before the fifteenth century the pharmacy was the center of intellectual life, the place where scientific discussions and investigations were carried on, and where the physician was consulted and where he prescribed to patients. But in the fifteenth century its importance increased, particularly in the matter of beautiful receptacles. One shop vied with another in the employment of noted potters for the production of boxes, bottles, and flasks. In the early part of the century oriental influence predominated in these wares; by the end of the century they were under the sway of the Renaissance; and it was from the production of this useful, as well as ornamental, ware that purely decorative vases developed.

Giunta Pisano.—In *Boll. Arte*, II, 1922, pp. 145-161 (pl.; 9 figs.), P. BACCI discusses old and new documents concerning the thirteenth century painter Giunta Pisano, and deduces the characteristics of his art, as they are shown by his two signed Crucifixions, one in S. Maria degli Angeli, Siena, the other in S. Ranierino, Pisa. He is the first to foreshorten the cross of Christ's nimbus; two of the arms of the cross are shorter than the other two. The artist apparently felt that the drooping head of the crucified Christ was better echoed in a turned, asymmetrical cross than in an upright, regular one.

A Madonna by Bernardo Daddi.—In his discussion of a Madonna in the Museo Nazionale at Naples, which he attributes to Bernardo Daddi, A. DE RINALDIS, in *Boll. Arte*, II, 1922, pp. 271-274 (pl.; 3 figs.), has something to say of the importance of accessory designs for paintings of this period. The pictures cannot be thought of apart from their carefully worked halo engravings or reliefs and their beautifully composed drapery patterns. The designs from the halos of the Madonna and Child and from the Madonna's tunic in this picture by Daddi are here reproduced.

A Painting by Barnaba da Modena.—In *Boll. Arte*, II, 1923, pp. 291-294 (3 figs.), P. TOESCA writes concerning a triptych in the parochial church at Lavagnola which has passed as a Romanesque painting dating from the middle of the eleventh century. Careful inspection of the work proves its relationship to Barnaba da Modena, and cleaning reveals part of his name and enough of the date to permit the inference that the year 1380 was the one originally recorded.

The "Tempietto" of Cividale.—A fully illustrated description and discussion of the much disputed Lombard "Tempietto" at Cividale in Friuli is given by C. CECHELLI in *Dedalo*, III, 1923, pp. 735-760 (22 figs.). A study of the frescoes, marble carving, and stucco ornament and figures bears out the previously observed mixture of styles, barbarian, Byzantine, and Roman. The present author accounts for this mixture by considering the work a product of Carolingian art. He attributes it to the epoch of Eberardo (836-866).

Sieneſe Sculpture in Wood.—In *Dedalo*, III, 1923, pp. 760-776 (pl.; 10 figs.), L. DAMI publishes some little known Sieneſe wooden sculpture of the period between Giovanni Pisano and the end of the fifteenth century, and discusses the progress of this art in Siena as it passed under the influence of Giovanni Pisano and Jacopo della Quercia and especially under the influence of contemporary painting, for the Sieneſe love of color made painting significant for every other form of art. How important color was for wooden sculpture is shown by the beautiful example of a Holy Bishop in the Bargello. Here the well-preserved polychrome is almost as important as the modelling itself.

SPAIN

Secular Sculptures at Játiva.—Játiva is one of the few cities which still seem to be inhabited by a mediaeval people, so completely has it shut itself up against modern innovations. This makes it particularly interesting as a place to study Romanesque and Gothic sculpture. The principal part of the present study, by C. S. CARRERES in *B. Soc. Esp.* XXX, 1922, pp. 88-108 (4 pls.; 5 figs.), is devoted to cataloging the coats of arms that are to be found built into the houses of the city, vestiges of the noble families of the past.

The Monastery of the Assumption at Játiva.—In *B. Soc. Esp.* XXX, 1922, pp. 206-220 (3 pls.), C. S. CARRERES summarizes the first chapter of his forthcoming monograph on the monasteries of Játiva, thus giving a description and the history of the monastery of the Assumption and of some of the interesting art objects which it contains.

Art Treasures of Daroca.—In *B. Soc. Esp.* XXX, 1922, pp. 275-292 (7 pls.; fig.), J. CABRÉ describes the treasures of the chapel of the SS. Corporales in Daroca. The chapel is built in the central apse of the Romanesque church of Santa Maria, and besides the architectural features of the chapel itself, such as

the jubé, which are noteworthy, the chapel is rich in splendid art objects, such as silver reliquaries and caskets of the thirteenth and fourteenth centuries, beautifully decorated tapestries, and some important paintings. Paintings of the royal family are attributable to Pedro de Aponte, a fifteenth century artist of the first magnitude who felt the cultural influence from Flanders.

Mediaeval Monasteries.—As the first in his series of studies of the mediaeval monasteries in the province of Valladolid, F. ANTÓN publishes in *B. Soc. Esp.* XXX, 1922, pp. 160-205 (6 pls.; 8 figs.), a monograph on the monastery of Sta. Maria de Valbuena, founded in 1144 and still preserving important remains from its various periods. This monastery, like all except one of the others in the province, is Cistercian and conforms to the general plan of the Spanish Cistercian monastery.

Santa Maria de Retuerta.—In his second article on mediaeval monasteries of the province of Valladolid F. ANTÓN, in *B. Soc. Esp.* XXX, 1922, pp. 239-269 (6 pls.; fig.), writes of the monastery of Retuerta. It was founded about the middle of the twelfth century, and the apse end of the church has some of the Romanesque and semi-Gothic style of that period. The chief architectural parts of the church date onward to the fifteenth century. There seems to dominate in the Romanesque and transitional style a Burgundian type, though there are other influences, such as those that came from the schools of southern France.

Santa Maria de la Espina.—In his third article on mediaeval monasteries in the province of Valladolid F. ANTÓN, in *B. Soc. Esp.* XXXI, 1923, pp. 53-92 (5 pls.; fig.), traces the history of the Cistercian monastery of Santa Maria de la Espina and describes the ancient parts of its construction. It was founded in the middle of the twelfth century, and the oldest parts of the church certainly date as early as the first years of the thirteenth century. The capitulary room is one of the finest parts of the whole building. It is a model of monumental sobriety in architecture and decoration. It dates, apparently, from the first quarter of the thirteenth century, is of typically Cistercian character, probably derived from Burgundian prototypes.

The ex-Cathedral of Roda.—In *B. Soc. Esp.* XXXI, 1923, pp. 28-43 (5 pls. fig.), R. DEL ARCO traces the history of the ex-cathedral of Roda, which, with that of Jaca, is in construction the oldest in Aragón and even in Spain. It was built in the second half of the eleventh century. The plan was basilical, with three naves and three apses. The fine portal, with its receding archivolts and storied capitals, and the rectangular cloister, with its floral capitals, completed the building in the twelfth century. In the church are paintings of the twelfth century or beginning of the thirteenth in the apse, and sixteenth century paintings by the famous Tomás Peliguet in the vaults and arches. In the crypt is the elaborately sculptured tomb of San Ramón, dating from the last third of the twelfth century. And there are also preserved in the church excellent examples of early liturgical equipments.

The Triptychs of Zumaya.—In *B. Soc. Esp.* XXX, 1922, pp. 121-131 (2 pls.), F. P. MINGUEZ describes the fifteenth and sixteenth century paintings in the cathedral of San Pedro at Zumaya. The most interesting one is a Flemish painting of the fifteenth century produced as a votive offering at the time of the naval battle between the Spaniards and the Portuguese in the Strait of Gibraltar in 1475. The naval battle itself is represented by a few ships in the lower half of the panel. In the upper half the Madonna in the centre is flanked by two saints who present the kneeling donors.

FRANCE

Gothic Moresque Ceramics in Southeast France.—In *Faenza*, X, 1922, pp. 25-35 (3 figs.), R. DE CABRENS finishes his classification of the fragments of pottery found in southeastern France. He concludes that the latter half of the fourteenth century is the date of the first appearance of this kind of pottery in Provence and that its use was discontinued in the sixteenth and seventeenth centuries. Some of it was imported from Algiers, some from Spain, and some was of local manufacture.

French Bronzes of the Twelfth Century.—O. VON FALKE's discussion in *Jb. Preuss. Kunsts.* XLIII, 1922, pp. 47-59 (10 figs.), of the bronze statuette of a prophet in the Kaiser-Friedrich-Museum resolves itself into a study of Nicolaus von Verdun. For the nearest counterpart to this unusually fine specimen of Romanesque bronze, so classic in design and so splendidly executed as to be worthy of the best Renaissance sculptors, is offered by the figures on the bronze lamp in the cathedral at Milan. And by comparing the details of this lamp with authentic productions by Nicolaus, it is shown to be his work. At the same time, other bronze pieces, such as the lamp pedestal at Rheims and the lamp pedestal at Prague, are brought into the circle of this artist's activity. But the more careful treatment of drapery and the pleasing arrangement of lines that one finds in the statuette of the prophet in the Kaiser Friedrich Museum betray a different spirit from that of Nicolaus, so that this work cannot be assigned to him but to one of his pupils, perhaps to the one who created the two reliquary tables in Trier. It is accordingly to be dated about 1220.

French Mediaeval Sculptures.—In *Art in America*, XI, 1923, pp. 76-88 (7 figs.), S. RUBINSTEIN writes of seven pieces of sculpture in the Mortimer Schiff collection in New York which represent the work of various French schools of the fourteenth and fifteenth centuries. Particularly, we find shown in them the intimate character of the portrayal of the Madonna in these centuries and the familiar attitude toward the saints.

The Clouet Family.—In *Burl. Mag.* XLII, 1923, pp. 111-129 (5 pls.), H. S. EDE gives a chronological account of the biographical data at present available concerning Jehannet and François Clouet, reproduces paintings more or less convincingly attributed to the two artists, and distinguishes between their manners of painting. François had a more facile but also more stereotyped manner than Jehannet, to whom each portrait was a new problem.

A Portrait by Jehannet Clouet.—In *Burl. Mag.* XLII, 1923, pp. 129-130 (pl.), A. E. PORHAM publishes a panel painting in the collection of Sir Henry Howorth which may reasonably be considered the portrait of the Greek scholar, Guillaume Budé, referred to by the latter in his notes, where he speaks of a portrait of himself by "Genet Clouet." The portrait represents an old scholar writing Greek in a book. The style of the work agrees with what we know of Jehannet Clouet's.

BELGIUM AND HOLLAND

The St. Stephen Reliquary.—In his study of the Stephen reliquary at Vienna, *Jb. Preuss. Kunsts.* XLIII, 1922, pp. 169-184 (24 figs.), M. ROSENBERG publishes old drawings of the reliquary, traces its history and determines its relationship to other works of art. Particularly interesting is the comparison of the medallion reliefs with the illustrations of the Utrecht Psalter. The similarity between the

figures of the reliquary and those of the psalter is so striking that it is clear that they came from one school. The reliquary is a generation later than the psalter; but the sketchy, spirited type of figures persisted longer in goldsmiths' work than in manuscript illumination.

A Book of Hours.—In *B. Soc. Esp.* XXX, 1922, pp. 233-238 (2 pls.), C. PEMÁN Y PEMARTÍN describes a fifteenth century book of hours in the library of the Escorial which, besides being worthy of note because of the beautiful finish and fine preservation of its miniatures, is of special interest because it is dated, a very rare circumstance with manuscripts of the group to which it belongs. The date is 1486. The work is typical of the Flemish school of miniaturists that produced a large number of these books in the last quarter of the fifteenth century and the first of the sixteenth, the school which Durrieu has christened Ghento-Bruges.

The Ince-Blundell Van Eyck.—In *Art in America*, XI, 1923, pp. 143-149 (fig.), M. BROCKWELL describes the Madonna by Jan Van Eyck, the recent acquisition of which by the National Gallery of Victoria, Melbourne, has caused so much comment. There is given here also some account of the Blundell family, to which the little painting has belonged for a century and a half.

The Donor of the Van Eyck Fountain of Life.—In *Jb. Preuss. Kunsts.* XLIII, 1922, pp. 120-125 (fig.), P. POST discusses the group of kneeling figures at the left in the Prado Fountain of Life, recognizing Philip the Good, his father, and his grandfather. Philip the Good is clearly the only one contemporary with the picture and is, therefore, the real donor. His father, however, is given the conspicuous place and is undoubtedly the one in whose honor the original painting was given. It was probably done either for the Chartreuse at Dijon or for the chapel in St. Vaast at Arras, where special services were held for the father. Various factors, particularly the age represented in the portrait of Philip the Good, point to about 1420 as the date of the original painting, a date some five or six years earlier, therefore, than the Ghent altarpiece.

GERMANY

Painting and the Theatre in the Middle Ages.—The relationship between religious plays and painting has often been noted, but A. ROHDE, in *Mh. f. Kunstw.* XV, 1922, pp. 173-179 (2 pls.), is the first to study this relationship in the fourteenth and fifteenth centuries, particularly as it is shown in the Petrialtar by Meister Bertram in the Kunsthalle, Hamburg. One thinks of the scenes on this altar as illustrating the Bible, but at the time they were painted the Bible was hardly accessible to the clergy even. Besides, they are so full of movement and spirit as to indicate that they were inspired by actual scenes. A study of them in connection with the text and directions for religious plays of the time makes them appear as illustrations of these plays and explains why we find almost precisely the same choice of details in pictures painted at different places at this time.

An Illuminated German Manuscript.—In *Jb. Preuss. Kunsts.* XLIII, 1922, pp. 163-168 (pl.; 5 figs.), F. WINKLER studies illustrations in Berlin, Munich, and Venice from a manuscript edition of Otto von Passau's "Die 24 Alten." The date is about the second quarter of the fifteenth century. The style is remarkably realistic and shows close similarities to panel painting of the period. In fact, the "Weilheim Master of 1444," the author of the four large altar panels

from Kloster Polling, is recognized as the painter of the book illustrations in question.

The Aeneid Manuscript at Berlin.—Through a study of the technique and style of the miniatures in the Aeneid manuscript in the Berlin Staatsbibliothek, A. BOECKLER, in *Mf. f. Kunstw.* XV, 1922, pp. 249-257 (2 pls.; 2 figs.), places the provenance of the manuscript in the school of Regensburg-Prüfening. The ornament, as well as the gestures, drapery, and figure types shows an unmistakable relationship to other manuscripts of this school. The date cannot be definitely determined, but it is somewhere in the early thirteenth century.

An Early German Painting.—The painting of the Holy Trinity recently acquired by the National Gallery, London, and published in *Burl. Mag.* 1922, p. 77 as a French work of about 1400 is discussed in *Art in America*, XI, 1923, pp. 123-134 (5 figs.), by R. VAN MARLE (Fig. 4). While the present author believes, with the former publisher, C. Holmes, that the painting forms a definite link between the school of Cologne and France, he sees in the panel the work of a German master rather than of a French master. The painting does not show Italian



FIGURE 4.—THE TRINITY BY HERMANN WYNRICH VON WESEL: LONDON.

influence as does most French art of the time, nor does it resemble in every respect the work of those few French artists, such as Beauneveu, who were independent of that influence. Comparison with the paintings of Cologne painters reveals the author of the Holy Trinity panel, Hermann Wynrich von Wesel, who painted the Madonna with the Pea-blossom, the St. Clare altar-piece, etc.

Friedrich Herlins.—In *Münch. Jb.* XIII, 1923, pp. 1-51 (31 figs.), E. BUCHNER makes a thoroughgoing study of the paintings of Friedrich Herlins, a late Gothic German artist, clearing up many points of doubt concerning his work. Of particular interest is the publication of the Legend of Jacob on the outside of the wings of the high altar in the Rothenburg Jakobskirche. This has been unknown to former students of Herlins.

SERVIA

Frescoes in the Manassia Monastery.—An example of art in the provinces of Constantinople after the fall of the Latin Empire is published by S. POPOVITCH in *Burl. Mag.* XLII, 1923, pp. 142-148 (2 pls.). The frescoes here reproduced from drawings are in the Manassia Monastery, built in 1418 near the Serbian town of Svilaynatz. They are badly mutilated; even when figures are largely intact, the eyes are gone, having been scratched out by the Turks in the fifteenth century. Nevertheless, one can appreciate the martial vigor of the figures and their development upon the basis of geometrical designs. The present author believes that such work as this is not inspired by Eastern influence, but is almost entirely controlled by local tradition.

GREAT BRITAIN

Rare Mediaeval Tiles.—In *Burl. Mag.* XLII, 1923, pp. 32-37 (pl.), M. R. JAMES and R. L. HOBSON publish some interesting early fourteenth century English tiles recently acquired by the British Museum. They differ from most mediaeval tilework in that the designs are made on them by means of graffiato technique, common enough in some forms of ceramic, but not in tiles. The subjects represented are scenes from the life of Christ as told in the *Liber de Infantia*. The artist probably took them from a French version of that book, particularly as the scenes as depicted on the tiles closely resemble the illustration in the Bodleian manuscript of the French version. The tiles acquired by the British Museum no doubt belonged originally to a much larger series, for the scenes are incomplete.

An English Set of the Twelve Apostles.—Another instance of the widespread market supplied by fifteenth century English alabaster sculptors is given by the recent acquisition from Spain by the Victoria and Albert Museum of a set of twelve apostles in alabaster. These figures date from the second half or middle of the fifteenth century, and probably were originally set in the wooden frame of an altarpiece together with other parts in alabaster. Each apostle holds in one hand his distinguishing symbol and in the other a scroll with a sentence from the Apostles' Creed. The gay coloring is still well preserved. (R. P. BEDFORD, *Burl. Mag.* XLII, 1923, pp. 130-134, pl.)

Anglo-Saxon Art.—In *Burl. Mag.* XLII, 1923, pp. 63-72 (pl.), H. P. MITCHELL publishes a porphyry portable altar framed in engraved silver. It is in the Cluny Museum and has gone under the label of German art of the twelfth century. Comparison of the figure engraving and the lettering of the inscription with pages

from the Register of Newminster, Winchester (A.D. 1016-1020), shows that the altar is Anglo-Saxon. This adds greatly to its importance, for the extant work of Christian Anglo-Saxon goldsmiths is very scarce. Such discoveries as this, together with monastery accounts, help to correct the erroneous but commonly accepted belief that the art of the Anglo-Saxons before the Norman conquest was very crude and that there was very little of it. *Ibid.* pp. 162-169 (2 pls.), the same author writes of some bone and ivory carvings of this period. Most important of them are a small triangular plaque and a crosier-head, both in ivory and both carved with delicate, graceful figures. Again, comparison with manuscript drawings gives us the school and the date of the work, showing, in this case, that both examples of ivory carving are work of the school of Winchester and date in the eleventh century, the crosier a little later than the plaque. The plaque was dug up near St. Cross, Winchester, and is now in the Winchester Museum; the crosier-head is in the Victoria and Albert Museum.

RENAISSANCE ART

ITALY

Giorgione Problems.—In connection with the paintings in the National Gallery attributed to Giorgione, C. HOLMES, in *Burl. Mag.* XLII, 1923, pp. 169-181 (3 pls.), makes a study of the early work of Giorgione, beginning with the two paintings in the Uffizi, The Judgment of Solomon and the Ordeal of Moses. Many characteristics of the Golden Age, in the National Gallery, point to Titian as its author, rather than to Giorgione. It was probably done when Titian was a pupil of Giorgione. Having ascribed this to Titian, it is easy to understand why the middle distance of the landscape in Giorgione's Tempest is so different and so much better than the rest of the landscape in that picture and the landscape in Giorgione's other paintings. This middle distance is identical in technique with that in the Golden Age and in other of Titian's paintings. We may assume, then, that Titian put in part of the landscape in the Tempest as well as the landscape of Giorgione's Venus.

Drawings by Titian.—Venetian drawings of the sixteenth century include many landscapes. These almost regularly follow a definite ideal scheme and lack the spontaneity and conviction of drawings from nature. An exception is afforded by a drawing by Titian in the Landesmuseum at Darmstadt, published by D. F. VON HADELN in *Jb. Preuss. Kunsts.* XLIII, 1922, pp. 106-108 (3 figs.). It represents an Alpine landscape, the country through which Titian travelled when he went from Venice to Cadore, and it bears all the characteristics of a sketch done before nature or fresh from her immediate inspiration. A very similar view, under different atmospheric conditions, appears in the background of Titian's Venus with the Organist in the Kaiser Friedrich Museum, Berlin.

A Painting by Boccaccio.—In *Art Bulletin* IV, 1922, pp. 130-138 (fig.), A. E. BYE gives an aesthetic analysis of Boccaccio Boccaccio's Mystic Marriage of St. Catharine in the Venice Academy.

Renaissance Reconstructions of Ancient Paintings.—In *Jb. Preuss. Kunsts.* XLIII, 1922, pp. 126-136 (5 figs.), R. FOERSTER discusses some of the attempts made by Renaissance artists to reproduce ancient paintings from literary descriptions. Apelles' Calumny was the most popular and received a number of independent interpretations as well as many variations of these fundamental types of reconstruction.

Italian Book-Binding.—In *Dedalo*, III, 1922, pp. 373-396 (pl.; 16 figs.), F. Rossi chooses from among the variously dated bookbindings in the extensive exhibition in the Pitti palace those that belong to the sixteenth century, the golden age of bookbinding in Italy. He describes the different types of bindings and follows the developments of the art in its most important centers, Venice, Florence, and Rome.

Renaissance Sculptures in Bologna.—In *Dedalo*, III, 1922, pp. 341-372 (pl.; 26 figs.), F. MALAGUZZI VALERI studies the development of fifteenth century sculpture in Bologna, calling attention to examples that have been moved as well as to those *in situ*. Besides the influence of contemporary Florentine masters,



FIGURE 5.—PANEL BY BRUNELLESCHI: DETAIL: FLORENCE.

the Bolognese sculptors felt most strongly the example of Jacopo della Quercia and Nicolò dell' Arco.

Lombard Furniture of the Fifteenth Century.—The fifteenth century Lombard furniture housed in the Castello Sforzesco at Milan is surveyed by C. VICENZI in *Dedalo*, III, 1923, pp. 482-501 (21 figs.). A great variety of cassoni make up the bulk of the material, but there are other articles, such as chairs, sideboards and cupboards. The different techniques and decorations are discussed.

The Competitive Panels of Brunelleschi and Ghiberti.—In *Art Bulletin*, V, 1922, pp. 31-34 (8 pls.), heliotype copies of C. KENNEDY's unique photographs of details from the Bargello competitive panels by Brunelleschi (Fig. 5) and Ghiberti are published and serve as the basis for a brief comparative study of the panels by F. R. SHAPLEY.

Paintings by Tintoretto.—Two paintings which originally formed part of Tintoretto's decoration in the Scuola della Trinità and which had been lost trace

of are published by M. PITTALUGA in *L'Arte*, XXV, 1922, pp. 233-236 (3 figs.). One, now in the storerooms of the Ducal Palace at Venice, represents the Creation of Animals. It has previously been published. The other, in the Uffizi at Florence, represents Adam and Eve being shown the forbidden fruit by God. The painting of the Creation scene and the God the Father in the other testify to the early appearance of decorative effect in Tintoretto's paintings. Besides these two youthful paintings, a mature work of Tintoretto's is published here, a scarcely noticed portrait in the museum of Copenhagen. It is a half-length portrait of an old man.

The Tempietto of Vicovaro.—In the Tempietto at Vicovaro, which was begun but not completed by Domenico di Capodistria, one can easily see that the upper part of the principal façade was done by a different artist from the lower part. B. SERRA, in *L'Arte*, XXV, 1922, pp. 203-206 (2 figs.), recognizes in the upper part, where the figures are much more animated than the crude, disproportioned ones below, some of the best work of Giovanni di Traù, called Dalmata. Besides the grace and animation of these figures, the chief distinguishing mark is the treatment of drapery, with its multiplicity of deeply cut, geometrically shaped folds.

Holy Water Basins by Michelangelo.—In *L'Arte*, XXV, 1922, pp. 200-202 (4 figs.), A. VENTURI discusses two holy water basins attributable in design to Michelangelo. The one in the Medici Chapel is simple and severe in design. The one in the old sacristy of S. Lorenzo gives a much more elaborate effect, largely due to the use of materials of three contrasting colors. This, Michelangelo's sole use of contrasting colors of marble, is probably the result of a desire to create an object in harmony with the polychrome character of the chapel.

Michelangelo's Leda.—In *Gaz. B.-A.*, VII, 1923, pp. 65-82 (6 figs.), M. ROY gives some negative information regarding Michelangelo's famous Leda. A comparison of a number of documents shows that Jean-Baptiste de Rossi was the artist who was commissioned by Francis I to paint this subject for Fontainebleau, that he painted it in 1530-31, and that it is his painting that now hangs in the National Gallery, London. We have several painted copies of this, while only engraving records the lost famous picture by Michelangelo. Di Rossi did not copy Michelangelo exactly; he changed or omitted some of the accessories.

The Steps of the Library of S. Lorenzo.—In *Mh. f. Kunstw.*, XV, 1922, pp. 262-274 (pl.; 4 figs.), F. PANOFSKY shows the bearing of some of Michelangelo's sketches upon the development of his designs for the steps of the Biblioteca Laurenziana. One of these sketches is dated 1555; the other belongs to about 1525. Both are well known but have not been used in this connection before.

A Florentine Pietà.—In *Burl. Mag.*, XLII, 1923, pp. 161-162 (pl.), R. FRX publishes an altar-piece belonging to Mr. Arthur Ruck, which has gone under the label of Pollajuolo, but which is rather to be ascribed to the school of Andrea Castagno. It is a beautifully finished piece of work with a pleasing composition, but the reduction of all forms to a flat decorative schematic pattern betrays the hand of a skilled craftsman who has learned to adapt the ideas of a master, rather than the hand of the master himself.

A Cassone-Panel by Francesco di Giorgio.—In *Art in America*, XI, 1923, pp. 102-107 (fig.), A. McCOMB attributes to Francesco di Giorgio a cassone panel in the collection of Mrs. E. M. Wheelwright, now on exhibition in the Museum of

Fine Arts, Boston. There are two subjects represented on the panel, the Judgment of Paris and the Rape of Helen. By comparison with dated works by Francesco this work may be dated in about 1475.

A Plate by Orazio Fontana.—In *Faenza*, X, 1922, pp. 3-4 (pl.), B. RACKHAM publishes a maiolica plate in the Salting collection of the Victoria and Albert Museum, London, which is of great interest for its subject matter. The signature which it bears, in the form of a monogram, indicates the celebrated ceramist Orazio Fontana of Urbino as its author. On the reverse the plate is dated 1541. On its face is painted a topographical view of the city of Urbino from about the point where the railway station now stands. Four horsemen, two identified by initials and shields as the Duke of Mantua and the Duke of Urbino, are coming down the road that enters the city gate. They pass by a small building where pieces of pottery displayed in the window suggest that this may have been the location of the Fontana bottega.

Maiolica at Florence.—In *Faenza*, X, 1922, pp. 144-147, G. B. publishes documents concerning Faentine and Urbinat maiolica workers in Florence in the fifteenth and sixteenth centuries.

Decorative Ceramics in Viterbo.—In *Faenza*, X, 1922, pp. 122-131 (7 pls.), G. ROSI and U. RICHIELLO study the extant pottery of Viterbo. Very little is found aside from that used as architectural decoration; and even the principal examples of this, a terra-cotta window and two pavements, show foreign influence, if indeed they are done by artists of Viterbo at all. Viterbo cannot be said to have developed an individual style of ceramic art; its work in pottery must be considered as an industry rather than as an art.

A Fifteenth Century Engagement Cup.—In *Faenza*, X, 1922, pp. 89-121 (5 pls.; 7 figs.), G. BALLARDINI publishes a beautifully decorated pottery cup in the ceramic museum at Faenza which bears in the centre a coat of arms and in a medallion on one side a heart transfixd with an arrow. The arms are here identified as the united emblems of the Manfredi and Bentivoglio families, and the transfixd heart is interpreted as an announcement of the engagement in 1481 of Galeotto Manfredi with Francesca di Giovanni Bentivoglio.

Paintings by Lorenzo di Credi.—In *Boll. Arte*, II, 1922, pp. 193-200 (pl.; 6 figs.), A. COLASANTI contributes an article toward the better understanding of di Credi, attributing to him several previously unpublished paintings. These include a beautiful tondo of the Virgin and Infant St. John Adoring the Child in the collection of Camillo Casati, Soncino, the Assumption of St. Mary of Egypt in the Gallery of Esztergom, Hungary, and another tondo Adoration in the Gallery at Karlsruhe.

Unrecognized Paintings by Giovanni Bellini.—In *Z. Bild. K.* LVII, 1922, pp. 112-115 (3 figs.), D. F. v. HADELN ascribes two important paintings to Giovanni Bellini. One is a half-length Madonna in the gallery at Stuttgart. Many unmistakable resemblances to other works by Giovanni can be found; of special interest is the relationship of the background to that of the Pieta in the collection of the Conte Donà in Venice. In both pictures the backgrounds are views of Vicenza. The Madonna at Stuttgart is probably to be dated about 1488. The second painting in question is a bust portrait of a young man in the Vienna Academy. It has previously been assigned to Gentile Bellini, Palmezzano, and others, but the present author believes it to be, on stylistic grounds, one of the finest works that we have by Giovanni Bellini.

Portraits by Giovanni Bellini.—In view of Vasari's statement that Giovanni Bellini painted many portraits, it seems probable that more are extant than are recognized. Using the portrait of the doge in the National Gallery as a touchstone, G. GRONAU in *Jb. Preuss. Kunsts.* XLIII, 1922, pp. 97-105 (7 figs.), attributes to the master several bust portraits of men, including one in the Louvre, one in the Hage collection, Nivaa, Denmark, one in the Museo Civico, Padua, one in the Kaiser-Friedrich-Museum, Berlin, one in Hampton Court, one in Mr. Platt's collection, Englewood, N. J., and one in the Gallery at Bergamo.

SPAIN

A Drawing by Velasquez.—In *B. Soc. Esp.* XXX, 1922, pp. 109-120 (4 pls.), the MARQUIS OF CASA TORRES publishes two drawings in his own collection.



FIGURE 6.—HEAD OF DEER ATTRIBUTED TO VELASQUEZ: CASA TORRES COLLECTION.

One is a copy of Velasquez' full-length portrait of Portero Ochoa in this collection. On the basis of the resemblance of this drawing to an engraving of the same subject by Goya in the Bibliothèque Nazionale the drawing is attributed to that artist. A drawing of a Cavalcade is attributed to Velasquez because of its likeness to his drawing of a Cavalcade in the British Museum.

The Casa Torres Collection.—In *B. Soc. Esp.* XXX, 1922, pp. 48-66 (4 pls.), are described the important paintings in the collection of the Marquis of Casa Torres. Among them are a deer's head attributed by old inventories to Velasquez (Fig. 6), a full-length portrait of Portero Ochoa, attributed to the same artist, a portrait of a priest attributed to El Greco, and a portrait of a woman attributed to Sánchez Coello.

Juan Picardo.—In *B. Soc. Esp.* XXX, 1922, pp. 153-159 (pl.),

J. AGAPITO Y REVILLA cites documents showing the importance of the sixteenth century sculptor, Juan Picardo, and attributes to him, among other examples, the principal retable in the collegiate church of Medina del Campo, Valladolid.

A Retable by Forment.—In *B. Soc. Esp.* XXX, 1922, pp. 5-16 (2 pls.), N. M. RUPÉREZ publishes documents and deduces from them the history of the splendid altar-piece in the major chapel of the Cathedral of Santo Domingo de la Calzada. The sculptor was Damián Forment, who came to Santo Domingo in 1537, began work on the altar-piece in that year and finished it only a few years later. This is his last work and shows a complete triumph of Italian classicism over the Gothic characteristics which one finds in his earlier work. Other artists gilded and painted the retable.

FRANCE

A Sixteenth Century French Triptych.—In *Gaz. B.-A.* VII, 1923, pp. 114-120 (2 figs.), A. GERMAIN writes concerning the two wings of the triptych of Notre-Dame de Bourg. (The central panel has been lost.) The matter of dating was cared for by the artist; "1523" is inscribed on one of the panels. But the name of the artist and his school leave plenty of room for research. The present author is not able to ascertain the name of the painter, but he places the work in the French school and traces in it Italian, as well as Burgundian and Flemish influence. The best preserved scenes are the Road to Calvary and the Entombment.

BELGIUM AND HOLLAND

Studies on Rubens.—In *Z. Bild. K.* LVII, 1922, pp. 117-118 (4 figs.), A. L. MAYER writes concerning several of Rubens' works. A sketch in the Huldshinsky collection in Berlin which some critics have considered an original study by Rubens for the second picture in the Decius-Mus series is shown to be only a poor, reduced copy of the Vienna painting. The original sketch by Rubens has recently reappeared in the art trade at Munich. Attention is called to a hitherto unnoticed connection with the antique in the use of motives from the Laocoön group in Rubens' Slaughter of the Innocents in Munich. It is also observed that the Reconciliation of the Romans and Sabines in the Munich Pinakothek is in far from its original condition. Comparison of it with Rubens' sketch and with an engraving made of the painting in 1794 proves that after this date it was added to and parts of the original were repainted.

Emanuel de Witte.—In *Gaz. B.-A.* VII, 1923, pp. 137-156 (pl.; 9 figs.), C. MISMÉ gives some bibliographical data concerning this seventeenth century Dutch master and analyzes the character of his art. Highly valued in his own day, de Witte is only now coming into his own again. We have known him only for his church interiors, but as a matter of fact he painted also landscapes, historical and genre scenes, and portraits. Particularly interesting are his open air paintings, where his problem is the contrast of a dark foreground with three-quarters length figures silhouetted against a bright background. Several paintings of fish markets show this composition at its best.

Jan van Goyen and His Followers.—In *Burl. Mag.* XLII, 1923, pp. 4-27 (8 pls.), C. HOFSTEDE DE GROOT gives an account of the life and training of Jan van Goyen, divides his activity into three periods, which may be clearly characterized by means of many dated pictures, and shows how many contemporary artists, aside from van Goyen's direct pupils, evince some of his characteristics in their work.

Vermeer's Master.—In *Burl. Mag.* XLII, 1923, pp. 37-38 (pl.), T. BORENIUS points out evidence that Vermeer must have gone to Italy, where he came into contact with Bernardo Cavallino. The broad, monumental treatment that Vermeer gives to his compositions has always suggested some Italian influence, and a comparison of his early painting of Christ in the House of Martha and Mary, in the collection of Mr. W. A. Coats, with Cavallino's painting of the Death of St. Joseph, in the Museum at Naples, is so striking as to prove the source of that influence. The color also of the Italian artist's pictures must have influenced Vermeer. One of Cavallino's pictures, the Woman Taken in Adultery, in the Verona Gallery, was at one time actually considered a Vermeer.

Self-Portraits by Bol.—In *Burl. Mag.* XLII, 1923, pp. 72-82 (4 pls.), A. BREDIUS enumerates a series of self-portraits by Ferdinand Bol.

GERMANY

A Cranach Portrait.—In *Burl. Mag.* XLII, 1923, p. 63 (pl.), C. DODGSON publishes an excellent portrait of a woman which is quite clearly the work of Lucas Cranach the younger. It must belong to his early career, for the costume of the subject dates it about 1535-40.

Some Drawings in the Prayer Book of Maximilian I.—In *Munch. Jb.* XII, 1922, pp. 130-137 (9 figs.), T. MUSPER studies the differences between the drawings of Burgkmair and Breu in the Prayer Book of the Emperor Maximilian I, showing that the previous assignment of the drawings was incorrect, that some of those attributed to Burgkmair are by Breu, and *vice versa*.

Peter Vischer.—In *Mh. f. Kunstw.* XV, 1922, pp. 258-261 (pl.), G. v. KIESZKOWSKI identifies the bronze grave tablet of Paul von Szydłowiecki of which documents give the inscription and the information that it was made by Peter Vischer's atelier for the Cathedral of Krakau. In a recent restoration of the cathedral a bronze plate which is decorated with the figure of a clergyman, coats of arms, and other ornaments was let into the pavement near the south portal. In spite of the damaged condition of the relief, the figure may be recognized, through comparison with a miniature portrait, as the likeness of the clergyman Szydłowiecki; the coats of arms bear out this identification. A Renaissance frame with its inscription has been combined with the tablet, so throwing archaeologists off the scent in spite of the Vischer character of the relief.

A Painting by Dürer.—Among Dürer's early wood engravings was a *Martyrdom of the ten thousand Christians*, which seems to have attracted the attention of the Elector Frederick the Wise of Saxony, who, in 1507, commissioned Dürer to reproduce the engraving in painting. In *Mh. f. Kunstw.* XV, 1922, pp. 275-282, W. JUNIUS publishes documents which relate the story of the wanderings of the painting until it came into the Imperial Galleries at Vienna in 1600.





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